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AN ABSTRACT OF THE PROCEEDINGS AT BOARD AND GENERAL  
MEETINGS, AND THE PREMIUMS OFFERED BY  
THE SOCIETY IN 1936

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1936



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\* \* *It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the Writers whose Papers are published in the 'Transactions.'*

JOHN STIRTON,  
*Secretary.*

8 EGLINTON CRESCENT,  
EDINBURGH.

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## His Majesty King George V.

BORN 3RD JUNE 1865

DIED 20TH JANUARY 1936

ASCENDED THE THRONE 6TH MAY 1910

*Photographed in London*

TRANSACTIONS  
OF  
THE HIGHLAND AND AGRICULTURAL  
SOCIETY OF SCOTLAND

---

King George Fifth.

---

*Born, 3rd June 1865; Died, 20th January 1936.  
Ascended the Throne, 6th May 1910.*

---

THE death of His Majesty King George V., which occurred with tragic suddenness on 20th January, plunged not only this country and the British Empire, but the whole world, into mourning. From men and women of all ranks and classes, and from every civilised nation, spontaneous and sincere tributes have been paid to his character as a ruler and as a man, and his death has been lamented as a world-wide loss. •

To us, his people, he was an ideal King and all that a constitutional monarch should be. He filled his exalted position with dignity, simplicity, and sincerity, accepting and discharging his manifold duties with calmness and courage. His humanity and broad sympathies endeared him to people all over the world. No monarch was ever better known to his people, and no monarch ever won the affection and devotion of his people in the same degree. Through the remarkable development of wireless communication, which

took place during his reign, the King was able, by means of his broadcast messages, to speak in the living voice to his people, and thus was brought closer to his subjects than any other previous monarch. It is therefore with feelings of personal bereavement and personal sorrow that we grieve for the loss of our great and beloved Sovereign.

It has been said that the late King inherited many of the qualities of his illustrious grandmother, Queen Victoria. Yet these qualities were practically unknown outside the Royal family circle until he succeeded to the Throne in 1910. As a young man he had no expectation of becoming King, and he was twenty-seven years of age, in 1892, when the death of his elder brother, the Duke of Clarence, placed him in the direct succession to the Crown. The succeeding eighteen years were years of preparation. How well and thoroughly that preparation was undertaken and carried out has been demonstrated by the fact that he was able to undertake the tremendous responsibilities of his high office and to discharge them in such a way that before his death he came to be known as the best-loved monarch who ever occupied the British Throne.

In a memorial tribute to King Edward VII., in the volume of 'Transactions' for the year 1911, the late Mr James Macdonald, Secretary of the Society, wrote: "Happy it is for the Empire that a son of such capabilities as King George V. is known to possess was ready for the succession. For it is a succession that demands capabilities of the highest order." That these capabilities were to be so severely tested in the course of the subsequent reign could not have been foreseen by the writer. All the perplexities, the anxieties, the manifold sorrows and disappointments which ordinarily beset the wearer of the Crown, were multiplied a hundredfold for our late Sovereign. Yet he faced all these with strong determination, with unruffled calm, and with a courage which inspired all around him. His reign in one sense was a long record of misfortune and sadness. Illness, bereavements, dissensions, labour unrest, and the horrors of a ghastly war—nothing was spared him, but his courage surmounted all trials. It is a matter of profound thankfulness that his indomitable spirit carried him through until the time when he was able to receive and appreciate that wonderful tribute of

loving homage paid to him by millions of his subjects, far and near, on the occasion of his Semi-Jubilee.

In another sense his reign was a record of success and achievement—of victory for our arms, and better still, victory over many of the ills, the alleviation of which had proved impossible for our predecessors. The marvellous new discoveries of science, the perfecting of discoveries already made, all of which in some degree have contributed to the amelioration of the conditions of life, will make the times of George V. memorable in the annals of history, and no one did more to encourage and stimulate these discoveries than our late King, both by his official patronage of numerous scientific and learned societies and by his personal interest in their aims and objects.

But not only among the more enlightened of his subjects were his influence and example felt. His sympathies were perhaps even more with those of his people to whom opportunity had not been given to rise above their humble surroundings. Nothing is more certain than that their griefs and sufferings went directly to his heart, and that in their joys he also rejoiced. His frequent attendances at the more popular events in the world of sport proved his desire to share with his people not only the sorrows but the pleasures of their lives.

When the call came for him to lay down his sceptre of temporal power, we like to think he realised to the full that he was saying farewell, as the much-loved Father of his people, to an Empire more closely united than ever before.

Among the many tributes to the memory of the late King, those of the Prime Minister, Mr Stanley Baldwin, stand pre-eminent. That which he broadcast on the evening following His Majesty's passing was touching in its sincerity and simplicity. Its wide publicity renders it unnecessary to quote from it here. His tribute in the House of Commons, more impersonal though none the less sincere, contained many passages of telling appeal, as when discussing the power of the Crown, he said: "It has had influence for good or ill, not only over that vast portion of the world which is part of the British Empire, but, in these days particularly, over the whole world itself. It was in the reign of King George V. that the greatest and the swiftest changes occurred,

and he met the challenge of the times without flinching, and he triumphed at a time when a slip of speech even, or action, might have wrought irreparable damage.

"Day by day he discharged those duties which thronged upon him, with his will rigorously trained to place the public interest first and last. His own ease and pleasure were never considered. I cannot tell you how it happened—as you all know, it did happen—and the sure instinct of our people gradually discerned that whatever human frailties or limitations might have attached to their King, his sense of duty to his people amounted to genius."

Mr C. R. Attlee, leader of the Socialist Opposition in the House of Commons, touched a note which was re-echoed in the heart of every Member, no matter what his shade of politics. "There is to-day no division in this House," he said, and proceeded: "The responsibility which rests on the shoulders of the ruler of a great nation must always be heavy, even in times of tranquillity, but when a man is called upon to rule not over one nation but over a commonwealth of nations, not in peace only but during the greatest war in history, not in a period of slow development but when the tide of change is running strongly and old landmarks are being swept away, the burden must be almost intolerable. Yet this was the lot of King George. He reigned during a period of transition. The short reign of his father, as we look back upon it to-day, seems but the continuance of the Victorian era. The great changes which were to follow could not then be descried. The forces which, for good or evil, were to make a new epoch were only beginning to appear.

"The next twenty-five years saw very rapid development. Even without the World War, those years must have been years of stress. The advance of science, the spread of education, the progress of ideas of self-government at home and overseas, and the pressure of economic forces must have called for difficult readjustment. The World War came and accelerated all these developments. It was a forcing-house of change. The old world passed away and a new one was formed.

"Two things, I think, were required from a Sovereign of a great State in these conditions. First, a sympathy with new ideas and a readiness to accept change, to adapt himself to

altered conditions; and secondly, the power to give to society, bewildered by the rapid progress of events, a rallying point of stability. These things were found in King George in full measure. They are not common. History affords many instances of rulers who have failed. Thrones have been overturned because their occupants stubbornly set themselves against the march of events. King George succeeded where others failed, because he was a democrat. He was a firm exponent of the difficult art of Constitutional Kingship. He knew and understood his people and the age in which they lived, and he progressed with them."

In the House of Lords tributes were no less eloquent and sincere, and the Archbishop of Canterbury, speaking with intimate personal knowledge of King George's sense of duty, drew a touching picture of the closing scene when he said :

"Let me lay some emphasis on his steadfast devotion to duty. I do so because it was revealed in a most moving manner in the very last day of his life.

"At noon of that day, propped up in his chair, looking so frail and weak, he received his last Privy Council. To the order constituting the Council of State he gave in his old clear tones the familiar 'Approved.' Then he made deliberate and repeated efforts, most gallant but most pathetic, to sign his last State paper with his own hand.

"Then, when the effort was too great for him, he turned to his Council with a last kindly and kingly smile. It was a scene which those of us who beheld it will never forget."

In Scotland we are proud of the interest King George took in the northern part of his Kingdom, and in all that concerned its welfare. It is a source of gratification that he obviously preferred to spend his holidays in the keen air of its northern latitudes, rather than in the more temperate lands of the fashionable South of Europe. He inherited from his father and his grandmother the castle and lands of Balmoral, and with them, if possible, a more ardent love for the Highlands, and he was never more at home than with the guns on the heather-clad moors of the north.

His visits to Holyroodhouse, in his Scottish Capital, which had become annual events, were eagerly anticipated by the citizens, and gave them the opportunity of becoming acquainted at closer quarters with the qualities which had



endeared His Majesty and his gracious Consort to his subjects in the south. We highly appreciated the State functions at the ancient City of Scottish Sovereigns, but still more the unostentatious way in which Their Majesties moved about among their people.

When we recall, too, Their Majesties' regular attendance at the services of our Scottish Church, when in residence in the country, we realise that the Oath regarding the security of the Church of Scotland, which it is one of the first duties of the Sovereign to take on accession to the Throne, was to King George no mere idle formality. With reference to this, the Rev. Dr Archibald Fleming, preaching in St Columba's (Church of Scotland), London, on the Sunday following the King's decease, said: "Both in letter and in spirit the late King had scrupulously observed this solemn undertaking. His love for the Church of Scotland was deep-seated, and was demonstrated on many occasions—not least on the occasion of the reconsolidation of the Church of Scotland seven years ago.

"When resident among the Scottish people he joined with them in the simplicities and hereditary solemnities of a Church in which he claimed not to be the head, but a devout and humble worshipper."

Though originally destined for a Naval career, and his early training imbued him with a love of the sea which he never lost, King George must have imbibed also in his earliest years a fondness for country life. To this can be traced his deep interest in everything that tended towards the betterment of agricultural conditions, and the improvement of cultivation and animal breeding. He inherited, on his succession to the Throne, the farms on the Royal Estates of Windsor, Sandringham, and Balmoral, and these he continued to uphold in the best traditions of his predecessors. While these Royal Farms must of necessity, as Mr William Burkitt pointed out in the 1931 volume of 'Transactions,' be show places, in the best sense of the term, efficiency and economy are nevertheless insisted upon. They thus exhibit to farmers and stock-raisers from all over the world examples not only of the rearing of fine stock, but of successful farm management. His late Majesty's personal interest in all matters pertaining to his estates was a matter of common

knowledge, and he entered so fully into the life of his Sandringham home that he was affectionately known as "The Squire" by the people of the district.

It is with pleasure and satisfaction that we recall the help and encouragement given by the late King to the Society by forwarding exhibits to its Annual Shows. With few exceptions, the lists of Stock Entries in the Catalogues of the Shows, during the whole of his reign, are headed by exhibits from "H.M. The King." Cattle of the Shorthorn, Aberdeen-Angus, and Red Poll breeds chiefly comprised His Majesty's entries, but in 1911, the year of his first entry, he was awarded the President's Champion Medal for a Highland Pony Stallion, "Skerryvore." It is also interesting to note that King George won the Championship for Shorthorn cattle in 1913 with a home-bred heifer, "Windsor Belle," and the Red Poll Championship in 1934 with a cow, "Necton Daffodil."

King George was the first member of the Royal Family to visit officially one of the Annual Shows. This was when, as Duke of York and President of the Society, he was present at the Aberdeen Show in 1894. It is of interest to recall that, at the General Meeting held in the Showyard, the Marquis of Huntly, one of the Vice-Presidents, took the opportunity of congratulating Their Royal Highnesses on the recent birth of their son, now King Edward VIII. Unfortunately, it is recorded that bad weather marred the occasion, rain falling almost without intermission. Notwithstanding the conditions, crowds of people "thronged the Showyard," and gave the President a most cordial reception, which he obviously appreciated, more especially, as he himself said, since it was held in the Capital of the County in which he had spent so many happy days of his life.

Thirteen years later, in 1907, when the Show was held in Edinburgh, our late King, then Prince of Wales, paid visits on the second and third days. On this occasion he was accompanied by his Princess, now Queen Mary, and the same enthusiastic welcome was accorded as at Aberdeen in 1894. Their Royal Highnesses were the guests of the Duke and Duchess of Buccleuch at Dalkeith Palace, and it is recorded in the account of the Show, in the volume of 'Transactions' for 1908, that the Society was indebted for the success of the

function, in spite of bad weather, mainly to the visits of Their Royal Highnesses. Gold Medals were offered by the Society in commemoration of the occasion for the best animal in each section of Cattle, Horses, Sheep, and Pigs. These medals were presented personally to the winners by the Prince of Wales, who, before leaving the Ring, inspected minutely the animals for which the medals had been awarded.

In 1930, King George further honoured the Society by graciously becoming its Patron, and the privilege of this Royal Patronage was continued and gratefully appreciated until the end of his reign.

No tribute to the memory of our late beloved Sovereign would be complete without a reference to his life's partner, Queen Mary. It can be said without fear of contradiction that as King George was the ideal King, so was Her Majesty the ideal Consort. Her sense of duty was centred in him, and she made it her lifework to sustain his courage and safeguard his health throughout all the trials and vicissitudes of his reign. No ruling Sovereigns within recent times have been so seldom separated, and it must have been a source of comfort to both that Her Majesty continued to enjoy that health and strength which enabled her to act as a bulwark to her husband at such times as he was laid aside by illness. In the words of the Premier, we say in all sincerity: "We are thankful, indeed, to feel that even in her sorrow Queen Mary is spared to the people who love her, and I am sure that we, all of us, all our people, will show her, in whatever way they can, how close she is to their hearts, and how they will treasure her, not only for the King's sake, but for her own."

The Empire is again fortunate in the matter of succession to the Throne, for in King Edward VIII. we feel confident that a Ruler has been given us who in every respect, save that of the experience which only time can supply, has been educated and trained to occupy the position so strikingly adorned by his revered father. He is well known among his people, and it is a comfortable thought to realise that where he is best known he is best beloved. His interests, as were those of his father, are world-wide and all-embracing. It is not too much

to say that there is no science, art, industry, or sport of which he has not some knowledge or experience more or less profound. He comes to take up the duties of the most exalted position to which fate can call a man, well equipped to carry on the great traditions of constitutional government associated with the Head of the British Empire. He comes in the enjoyment of a world-wide popularity, for even in his father's lifetime it was often said of him that he was the most popular man in the world. He comes also gifted with a physical courage of quite exceptional quality, and we have every reason to believe that his moral courage will be equal to any strain to which his exalted and isolated position may subject him.

To members of this Society his well-known interest in everything agricultural—an interest exhibited in the best of all practical ways, that of running farms of his own—will be an additional incentive, if any were required, to render him that homage and loyalty which are his by right.

Though not so frequent an exhibitor at the "Highland" Shows as his father, entries of Shorthorn Cattle have been forward on several occasions from the Prince of Wales' Cornwall Estate. At the Edinburgh Meeting of 1919 his yearling bull, "Christian King," was awarded First Prize in his class.

When Prince of Wales, King Edward VIII. honoured the Society by being present at the Show held at Kelso in 1926. He was the guest of the Duke of Roxburghe, President of the Society, at Floors Castle, and made his visit on Friday, the closing day, when he was enthusiastically welcomed by the large gathering of visitors. In 1931, the year of the Hundredth Show, the Prince further honoured the Society by accepting the office of President, and he attended in person to view the exhibits and preside at the General Meeting. Unfortunately, as will be remembered, an extensive outbreak of foot-and-mouth disease made it necessary to cancel the entries of Cattle, Sheep, and Pigs.

With reference to this occurrence, His Royal Highness, in acknowledging a vote of thanks moved by The Earl of Stair at the General Meeting of members, remarked, with characteristic humour: "I cannot flatter myself to think that I have drawn as many people here as the cattle would," but he

showed his full understanding of the worries of both the exhibitors and those responsible for the success of the undertaking in his closing words : " I sincerely hope, in offering my sympathy to those who have taken all the trouble in getting their cattle in shape for the Show and who have been disappointed, that it will not materially or very greatly affect the success of the Show, which I hope has many very successful years ahead of it." There can be no doubt that the presence of the Prince of Wales did much to ensure that the Show, which under the circumstances might have been a complete failure, should eventually prove to be an outstanding success.

At a Meeting of Directors of the Society, held at 8 Eglinton Crescent, Edinburgh, on the 5th of February 1936, the Chairman, Mr Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive, moved that Addresses of Condolence on the death of King George V. be sent to Their Majesties King Edward VIII. and Queen Mary, and this was unanimously agreed to, the Directors present upstanding. The Addresses were in the following terms :—

*UNTO THE KING'S MOST EXCELLENT MAJESTY.*

MAY IT PLEASE YOUR MAJESTY.—

WE, Your Majesty's most dutiful and loyal subjects, the Highland and Agricultural Society of Scotland, incorporated by Royal Charter, humbly desire to approach Your Majesty with an expression of our heartfelt sympathy in the great sorrow which has come to Your Majesty in the lamented death of your honoured and revered Father, our late Most Gracious and Beloved King.

We recall with gratitude that he was spared to witness those enthusiastic expressions of loyalty to his Throne, and deep love and regard for his person, which were so strikingly demonstrated during the Jubilee year of his memorable reign, and which we believe may have given him encouragement to continue in his untiring efforts to promote the peace and secure the welfare of his people.

We beg respectfully to assure Your Majesty of our loyalty and devotion to your person and Throne, and we earnestly pray that, inspired and sustained by the memory of your Royal Father, Your Majesty may be

long spared, in health and happiness, to reign over a loyal, prosperous and united people.

Scaled with the corporate Seal of the Society, and signed on its behalf at a Meeting of the Board of Directors, by Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive, Chairman, and John Stirton, Secretary, this 5th day of February 1936.

R. MACMILLAN, *Chairman of Directors.*  
JOHN STIRTON, *Secretary.*

UNTO HER MAJESTY QUEEN MARY.

MAY IT PLEASE YOUR MAJESTY.—

WE, the Highland and Agricultural Society of Scotland, incorporated by Royal Charter, humbly desire to approach Your Majesty with an expression of our profound sympathy in the great bereavement which Your Gracious Majesty has suffered in the death of your illustrious and Royal Husband, and our revered and well Beloved King.

We hold in grateful remembrance the great help and inspiration which Your Majesty so graciously afforded to our late Beloved King in bearing the responsibilities and discharging the duties of his exalted station, throughout a memorable reign in which his untiring devotion to public duty and his kindly interest in the welfare of his people gained the love and affection of all over whom his rule extended throughout our great Empire.

We earnestly pray that Almighty God may comfort and sustain Your Majesty in your great bereavement and sorrow.

Scaled with the corporate Seal of the Society, and signed on its behalf at a Meeting of the Board of Directors, by Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive, Chairman, and John Stirton, Secretary, this 5th day of February 1936.

R. MACMILLAN, *Chairman of Directors.*  
JOHN STIRTON, *Secretary.*

These Addresses were forwarded to Their Majesties, and letters of acknowledgment were duly received, through H.M. Secretary of State for Scotland, conveying "grateful Thanks for the assurances of sympathy and devotion" to which the Addresses gave expression.

JOHN STIRTON.

## BEEKEEPING.

By J. CUNNINGHAM, Edinburgh and East of Scotland College of Agriculture.

BEEKEEPING is as old as any other branch of agriculture. But it has been rather the custom to look upon it as an obscure branch. It would appear, however, that it is emerging from its obscurity and making a strong claim for consideration as a rural occupation of some importance. The work of the agricultural colleges and beekeeping associations has been in a great measure responsible for this improvement, by the dissemination of up-to-date knowledge on the subject.

There is also a growing demand for honey, stimulated undoubtedly by the recommendations of it by the medical profession and dietetists as a food of high calorific value. It is interesting to find that in the large towns there are many merchants stocking honey who some years ago did not think it worth while. Also, it is noticeable that home honey is gradually displacing foreign honey. There is still a long way to go in this direction, however, for a great deal of honey comes into this country annually from abroad.

It is well known that bees can be kept profitably, and prospective beginners are always eager to know the return per colony that might reasonably be looked for. But this is a question which is rather difficult to answer. For instance, the flora and nature of the soil may vary from district to district. As a consequence, greater weights of honey may be harvested in some locations than in others. Climatic conditions will also influence results, and here again there are certain parts of the country reckoned to be favourable because of the rainfall being lighter than in other places. Another factor of great importance is management. The greater the beekeeper's knowledge of bees and their ways, and the greater the skill by which the creatures' energies are directed towards storing, the more successful the results are likely to be. This means that beekeeping, like any other trade or profession, must be learnt. However, it might not be amiss to state that while at one time 30 lb. to 40 lb. of honey was considered a good return from one colony, a return of 100 lb. is to-day very common indeed. Many colonies in different parts of the country have within recent years produced 200 lb., and in some isolated cases 300 lb. has been taken from a single colony. These satisfactory results were obtained by intelligent management, assisted by a good location and favourable weather.

The day of the neglected beehive in a sequestered corner of the garden, dissipating its energies by repeated swarming, is past. Modern beekeeping methods are of necessity more complicated than the old-time methods. This does not mean that we are moving in the wrong direction, although there is a tendency sometimes towards over-elaboration.

#### INMATES OF THE HIVE.

In the summer time a normal colony of bees is composed of three different classes of individuals, in the proportions of one queen, a thousand or two of drones, and any number from thirty thousand to sixty thousand workers.

The queen is the true female and mother of the colony. She has been specially designed by nature for egg-production, and apart from this, and the laying of the eggs in the cells of the comb, she does nothing else in the colony. She does not even feed herself. The worker bees attend to her food requirements and keep offering her sustenance as she passes from cell to cell. Egg-laying begins normally in February, is continued throughout the spring and summer, and ends in October. No brood is reared during winter. During the month of June the queen is at the height of her egg-laying powers, and may lay 2000 to 3000 eggs in a day. The eggs of a fertile queen are of two kinds: fertilised eggs which give rise to queens or workers, depending on the class of cell in which the eggs are laid, and also on the quantity and quality of the food supplied to the larvæ; and unfertilised eggs which develop into drones only. A young queen becomes fertile when one to three weeks old, after mating with the drone or male bee. The mating which takes place in the air outside the hive only occurs once, and suffices for the rest of the queen's life, the sperms being stored in the queen's body and used for fertilising those eggs intended to produce queens and workers. After mating, the queen settles down to egg-laying, and does not normally leave the hive again except when migrating with a swarm. A queen's duties, therefore, are primarily indoors. Her span of life may be three to four years. Under modern beekeeping conditions it is seldom she is allowed to live so long. If the beekeeper does not replace her with a younger and more vigorous queen, the bees themselves may do so naturally by rearing within the colony a new queen. The new queen, after fertilisation, takes her mother's place as the egg-layer. This replacement of an older queen by a younger one by the bees themselves is termed supersedure, and often takes place unknown to the beekeeper. It is nature's way of maintaining the vigour of the colony.

The drones are the male bees and are brought into existence



for one special purpose, the fertilisation of the young queens reared during the summer months. They make their appearance usually in May. At the end of the summer, when no more queens are likely to be reared, the drones are cast from the hive to die of exposure and hunger.

The worker bees predominate in the colony. They may be termed undeveloped females, for they have ovaries, but these are atrophied. While the queen and drones are concerned primarily with reproduction, the workers have nothing to do with that side. They are the labourers: they fetch and carry. Their duties include the collection of food—i.e., nectar and pollen. Incidentally, when visiting flowers for these necessities, they unwittingly perform a highly important work in the plant world by assisting in the cross-fertilisation of flowers. They also feed the brood, build comb, ventilate the hive, and defend the home and its stores of food by means of their stings. Being collectors of nectar and makers of honey, they appeal to the beekeeper as a highly important class, and it is the aim of the progressive beekeeper to have in the hive during the honey season as large a worker population as possible.

#### ADAPTABILITY FOR BEEKEEPING.

The fact that honey-bees are creatures possessed of a sting tends to make them suspect in the minds of many who would otherwise like to keep them. Their stinging propensities, however, are often greatly exaggerated. Only an exceedingly small proportion of the population of a colony may cause trouble by stinging when roused. And if the beekeeper is willing to exercise the necessary care and patience in first of all subduing the bees by the accepted methods, and continuing to use care so long as the hive is open, the small proportion of bees already referred to may be found to cause very little trouble. If the greater number of the bees were to make use of their stings when irritated, then beekeeping would become an impossible pursuit. The beginner, of course, must make up his mind to receive stings on occasion. The first few stings may tend to discouragement. But this will be the testing time, and if the beekeeper has it in him to persevere, it will be found that the initial fear of stings gradually subsides. The use of a veil to protect the face is strongly recommended for all beginners, and even in some cases gloves to protect the hands and wrists. These will be found exceedingly useful in assisting the beekeeper to acquire confidence. Later, the gloves may be dispensed with as a nuisance. But the veil is more or less indispensable. Most beekeepers of experience carry a veil in the pocket. They may not at times require to use it when working with bees, but it is always there ready when occasion demands. The average person reacts normally

to bee-sting poison. Inflammation and after-swelling of the affected part accompanied by irritation occurs. After some years, however, these discomforts become less troublesome, until in time the little prick of pain on being stung is all there is to it. There is the rare person, however, who on being stung becomes very ill. Such an individual should not on any account continue in beekeeping.

It is clear that bees are an altogether different proposition from the other farmyard stock, and must be handled accordingly.

#### TYPE OF HIVE.

When about to choose a hive some care should be exercised. It is unwise to go to a shop stocking beekeepers' supplies, and, without previous advice, choose a hive that might appeal

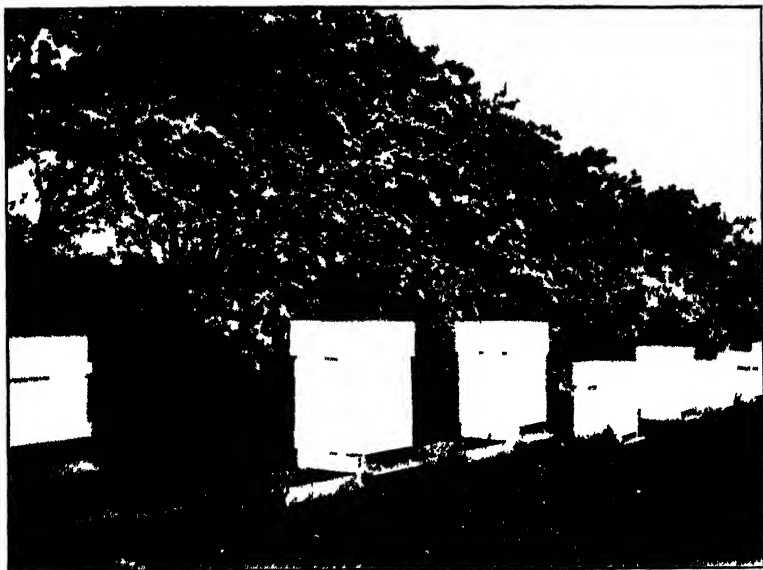


Fig. 1. — *Wormit Commercial hives in East Lothian W.B.C. hive, left-hand corner.*

because of its fine lines and many gadgets. Simplicity in hive construction, together with ease of enlargement to suit the requirements of a populous colony, is what is wanted if beekeeping in this country is to continue along the path of progress. Too great a proportion of the hives in use to-day hinder the beekeeper in the application of many of the modern manipulations so necessary for success.

There are two general classes of hives, double-walled and

single-walled. The double-walled hive of the W.B.C. pattern (Fig. 1), which is the one in general use, is a good hive for the beekeeper who is not keen on moving the bees to other pastures. It is easily enlarged to suit the requirements of brood-rearing and honey storage. The fact, however, that it is double-walled, with inside movable fittings in addition to the outside fittings, makes it an awkward hive to transport, and great care is necessary when preparing for its removal to prevent the escape of bees on the journey. The presence of legs, gabled roof, and porch, also add to the difficulties of transport.

This is the age of easy and rapid movement from place to place, and beekeepers are beginning to realise the possibilities of migratory beekeeping. Colonies may be moved at opportune

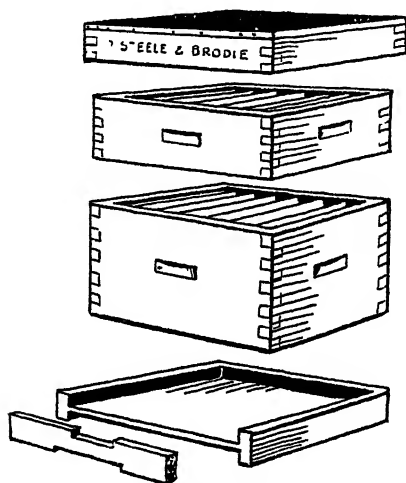


Fig. 2 —The "National" hive.

times from one location to another in order to take advantage of new honey-flows. It is obvious that this system demands a special type of hive; a hive that can be prepared for a journey with as little trouble as possible; a hive that will take up the minimum of space on a lorry. Such a hive, therefore, should be as simple in construction as possible. It should be single-walled. The roof should be flat, that another hive may sit on top if need be. It should be without legs and porch. In addition, of course, the hive should be easy of enlargement.

There are two hives on the market, to take British standard combs, which answer to these requirements—i.e., the "Wormit Commercial" (Fig. 1), and the "National" (Fig. 2). Both are strongly recommended to beekeepers who may be desirous of developing the commercial side of beekeeping.

## SPRING MANAGEMENT.

After the winter, the first signs of life at the entrance to the beehive may be observed on mild days towards the end of February or beginning of March. Bees may be seen leaving and others returning. Some of the returning bees may be carrying pollen on their hind legs. This pollen is a valuable bee food, and along with honey forms the diet of the honey-bee. Pollen is necessary for the feeding of the young. It was a common practice at one time to supply an artificial pollen—*i.e.*, pea-meal, rye-flour, &c., under the belief that because of a paucity of early spring flowers there was a shortage of natural pollen. In this country, at any rate, there is no need to give the bees these substances. The natural pollen shortage in spring is purely imaginary. The supply is usually ample for the needs of the bees during February, March, or April. For, in addition to what they are able to collect outside, there is usually some stores of pollen in the combs which have been carried over from the previous autumn.

It is a mistake to imagine that because bees may be seen flying during mild weather the hive may be opened and an examination of the combs made. Beekeepers often err here, enthusiastic beginners especially being offenders. To take the hive to pieces, and to displace combs too early in spring, may result in queenlessness. The danger is not that the beekeeper may kill the queen accidentally, or lose her by allowing her to drop on the ground, but that owing to the disturbance the bees themselves may deliberately destroy her in a way described as "balling." This treatment of the queen by the bees is not to be feared as a rule after April.

It is obvious that the loss of the queen early in spring is a disaster. It means a cessation of brood-rearing for the time being. The population instead of increasing soon begins to decrease, and the colony may be unprofitable for the remainder of the season. It is safer, therefore, to delay as long as possible any inspection of the combs which requires their displacement, until perhaps the end of April. When it is decided to make an inspection, it should be brief. The purpose of the examination should be to find out, in the first place, if the colony is queen-right. That is, if the queen still survives after winter, and if she is producing worker brood. And in the second place, it is important to ascertain the amount of stores still remaining in the hive, after wintering. In order to satisfy himself on these two important points, the beekeeper need not take the hive to pieces, or waste much time about it. The smoker should be lit and the roof of the hive removed. The quilts should be gently peeled back, exposing the top of the brood combs. A little smoke should at the same time be

blown across the top of the combs, not down between. The smoke will subdue the bees and drive them down. The division board, or 'dummy' as it is called, usually next to the outside comb, may be removed altogether. The space formerly occupied by the 'dummy' now becomes useful. Into it may be pulled or slid the outside comb. Each comb in turn can now be pulled along to allow the beekeeper to see down between the combs. Should the bees begin to work up towards the top again another puff of smoke should be given. Whilst gently separating the combs one from another in the way described, and without taking them out of the hive, it is possible to see, usually in the centre combs, the sealed worker brood, and also in the outside combs the sealed stores of honey. Worker brood indicates the presence of a fertile queen; consequently, when worker brood is found there is no need to waste time, especially in spring, searching for the queen. If the beekeeper is satisfied also with the quantity of stores observed, the combs should be pushed into their original positions, the dummy replaced, and the hive closed. The whole operation may be completed in five or seven minutes' time. If there is difficulty in finding worker brood by the method described, a more protracted search is justifiable. If it is discovered that the colony is broodless and queenless, the beekeeper may be unable to make up his mind what to do with it. A fertile queen may be purchased and given to the queenless bees. Generally, however, it is better to unite the queenless colony to a queen-right colony, choosing one, if possible, that may be in need of such assistance.

If the stores are found to be low, feeding must be resorted to. The food may consist of syrup made from granulated sugar and water, in the proportions of 1 lb. of sugar to 1 pint of water. The water may be boiled separately and poured into the vessel containing the sugar. Stirring for several minutes will assist in melting the sugar. For providing the bees with the syrup, one of the smaller types of rapid feeder is better than the bottle type, which is too slow a method of feeding, especially if the stores in the hive are almost exhausted. Bee candy may be supplied, or unfinished combs of honey carried over from the previous summer. Any feeding that may require to be done should be carried out in the evening after the bees have ceased to fly. Day-time feeding creates too much excitement among the bees, and often leads to an outbreak of robbing.

Colonies that have wintered on ten British standard combs have to be carefully watched in the spring for fear of a shortage of stores. A brood-chamber of this capacity is not large enough to contain a good reserve of food for both winter and spring. The return to brood-rearing is responsible for an

increase in the rate of food consumption. Unfortunately, during the early spring months the amount of nectar collected by the bees is not sufficient to keep pace with the requirements. Hence the colony is entirely dependent during this period on the stores within the hive. Beekeepers often fail to realise this fact, and imagine that because the bees are flying freely every other day they must be getting plenty. Death from starvation is the fate of far too many colonies during the spring. This mortality rate could be considerably reduced if beekeepers in general could be induced to make use of a brood-chamber of greater capacity than that provided by ten British standard combs. The larger brood-chamber would contain more stores for both winter and spring, and, incidentally, would be the means of eliminating spring feeding, and thereby simplifying spring management.

### SWARMING.

Swarming is the method chosen by honey-bees in order to multiply their colonies. A single colony of bees, if left to its own devices, may in the course of the summer divide itself into three or more colonies. Each division or swarm that leaves the old hive is provided with a queen. The swarm on reaching its new home will establish itself by building comb, storing food, and rearing young, just as its mother colony did. And, again, like its parent, it will divide itself by the swarming method the following summer. In this way the species is propagated.

The swarming season begins normally in May and lasts till the end of July. In preparation for swarming, a colony will build on the combs any number from a dozen to two dozen, and sometimes more, queen cells. In these special cells shaped like pea-nuts, the new queens, who are to accompany the swarms, will be reared. The developing queens will purposely be of different ages, to provide a succession of queens for the swarms as they are due to leave. Some importance is attached to the first queen cell started by the bees. On its being sealed, nine days after the egg has been laid in it, and when feeding of the larva ceases, the first swarm is due to leave. A second swarm, or afterswarm as it is called, may leave in a week or nine days' time after the first. Thereafter, swarms may appear at intervals of six or seven days. A number of dead queens on the ground in front of the parent hive may be an indication that swarming is over.

The first swarm, normally, will contain the old fertile queen, who has done duty in the hive since the previous summer. All the other queens to leave with swarms will be young unfertilised queens direct from the queen cells. An afterswarm

cannot be said to be properly established in a new domicile until the queen is fertilised and has commenced to lay.

It is fortunate for the beekeeper that a swarm on leaving its parent hive has a habit of clustering on a nearby shrub or small tree, thereby giving him the opportunity of retrieving it and placing it into a new hive. Occasionally, however, a swarm absconds without clustering, and is often lost. Even a clustered swarm may go off if allowed to hang too long. It is wise, therefore, to capture the swarm as soon as possible after the bees have formed a cluster.

### SWARM CONTROL.

Uncontrolled swarming is wasteful. There is loss of honey, bees, and the beekeeper's time and temper. It is not an easy matter to prevent every colony from swarming, but it is possible by intelligent management to reduce the number of swarming colonies in the apiary. Even those that do swarm require to be properly managed in order to persuade the bees to settle down to honey storing with the minimum of delay, and to prevent the issue of afterswarms. It is in this part of the subject, perhaps more than in any other, that the beekeeper's skill and knowledge of bees is thoroughly put to the test. A good understanding of what is wanted will have its reward in satisfactory crops of honey.

It must be emphasised, that control of swarming is made more difficult when bees are forced to use small brood-chambers. A permanent brood-chamber of ten British standard combs is an incentive to swarming. This does not necessarily mean that the British standard comb should be replaced by a larger one. The British standard comb may be retained, but the brood-chamber should be enlarged beyond the capacity of ten of these combs. For instance, other five combs may be added laterally to make a brood-chamber of fifteen British standard combs. The old ten-comb hive fittings would, of course, require to be scrapped in this case, and fittings to suit fifteen combs provided. Or, instead of enlarging laterally, it may be done vertically, by placing on the top of the existing ten-comb brood-chamber, a box containing ten shallow extracting combs, to be used for brood-rearing instead of honey storage. Or, again, the ten-comb brood-chamber may be doubled in size by adding on top another of the same, thereby making up a brood-chamber of twenty British standard combs. These larger brood-chambers will provide more egg-laying space for the queen, encouraging her to lay at a greater rate, and as a result, producing a stronger colony of bees, with a prospect of more honey. Moreover, big strong colonies swarm less than small and medium-sized ones.

The time to enlarge the brood-chamber is in the spring, when the colonies are increasing their populations. If a colony is crowding all its brood combs, and no honey-flow expected for two or three weeks, the brood-chamber should be enlarged by any of the methods already described. The combs given to the bees should be already built, in good condition, and with a minimum of drone comb.

In thus providing more space for a greater production of brood, the first step in swarm control has been taken. For it will prevent the early swarm, so highly thought of by the beekeeper of the straw-skep era.



Fig. 3 —(One of several apiaries belonging to Mr J. Elder, East Bearford, Haddington)

On the nature of the district will depend the amount of space necessary for the enlargement of the brood-chamber. Too much room might mean that the colony may not have sufficient time to use it all for brood-rearing before the beginning of a honey-flow, and in this case a great deal of the honey will be stored in the unused space, instead of in the honey super. A beekeeper who knows his district well, the honey-flows likely to occur, and when, is not in the same danger of making this mistake. At any rate, the enlargement to the brood-chamber is supposed to keep the colony breeding, and to prevent swarming, until a honey-flow begins. After that, the intelligent management of the honey supers will do much



to reduce the risk of swarming. But it may not suffice. It is often a good plan when the work of building comb and storing honey has begun in the first super, to place underneath the brood-nest, a box of shallow frames fitted with worker foundation. This provides for comb-building work at an opportune time underneath the nest. After the combs have been built, the space may be used for clustering purposes by the thousands of surplus young bees awaiting the time when they may become foragers. This host of youngsters would in the ordinary course of events tend to crowd and congest the brood-nest, a condition favourable to swarming. The provision of this box, fitted in the manner and at the time described, has been proved by experiment under favourable climatic conditions to be a deterrent to swarming.

If swarming takes place, the parent colony should be moved from its stand to a position alongside, and the entrance to the hive turned round to face at an angle of  $90^\circ$  to its former position. On the old site should be set down a new hive fitted with a brood-chamber containing frames with full sheets of worker foundation. A queen excluder should be placed over the brood-chamber. The supers, if any, should now be transferred from the parent colony to the new hive. The new hive is now ready to receive the swarm. By virtue of its position on the old site, the swarm now attracts all the flighted bees belonging to the original colony, and is thereby considerably strengthened. The loss of its flighted bees may render the parent colony on the new and unfamiliar site less troublesome by reducing the risk of afterswarming. Many swarmed colonies so treated do not swarm again. A little further manœuvring of the parent colony may, however, make the prevention of afterswarming more certain. For instance, the following day after swarming, make the first movement towards getting the hive entrance turned round again, that it may face in the original direction like the swarm alongside. One half-turn will be sufficient to begin with, so that now the entrance is at  $45^\circ$  to the original position. The next day the turning movement may be completed, with the entrance now facing in the same direction as the swarm. The parent colony may now be left unmolested alongside the swarm for six days, or until a day or so before the second swarm is due. It is then moved from its stand, about the middle of the day, if possible, when the bees are flying freely, to a new site several yards distant. This will have the effect of diverting more bees from the parent colony to the swarm, reducing still further the danger of a second swarm issuing. The new bees thus diverted will be bees that have reached foraging age during the period that the parent colony was beside the swarm.

The treatment of the swarm and parent colony in the

manner described, insures a strong swarm, and a continuance of honey-making with little loss. It also, as already stated, reduces considerably the nuisance of afterswarming.

### SUPERING.

A super is a box containing sections or combs, to be placed on the hive during the honey season for the bees to use for the storing of their surplus honey.

In some localities supering may begin in May, in other parts, June, depending on the flora of the district. Before the bees can be expected to begin work in the first super, the conditions in two respects must be favourable. Firstly, all the brood combs underneath must be well covered by bees. If this is so, there will be surplus bees in the brood-chamber



Fig. 4.—*Arrangement of honey supers.*

ready to expand into the super. But if some of the brood combs are not in use by the bees, then the colony is not yet strong enough for supering. Secondly, there must be a honey-flow from some source. If there is no honey-flow, nothing will be done in the super, even although the colony itself is in a favourable condition. But if the two favourable factors mentioned are present, the first super should be given immediately. It is advisable to have a queen excluder between the super and the brood-chamber, otherwise it may be discovered later that the super contains brood as well as honey.

When storing is in progress in the super, care must be taken to see that the bees do not become short of storing-room. It is most important during the honey season to supply the bees with storing space a little in advance of their needs. Inattention to this may result in the colony swarming.

The second super should be given when comb-building is in progress in the outside sections or frames, or when honey is

being sealed in the centre of super No. 1. This second super should be placed underneath super No. 1 (Fig. 4). This entails the temporary removal of super No. 1 until super No. 2 is set in position over the brood-chamber. Super No. 1 is thereafter placed over super No. 2. If a third super is required the same procedure is followed, super No. 3 going under super No. 2, and next to the brood-chamber. By this time super No. 1 may be completed, and if so it can be taken off the hive altogether.

This arrangement of the supers provides the bees with storing room where they like it best, just above their brood. The arrangement also suits the beekeeper, for the completed super is always at the top and can be taken away when convenient to do so.

### COMB HONEY.

By comb honey is meant the little wooden section  $1\frac{1}{4}$  in. square, into which the bees have built their comb, and then stored it with honey. This neat little piece of honeycomb, so attractive in appearance, has for long been a novelty with the honey-buying public.

The wood surround comes from the appliance dealer in its flat, and has to be folded into a square, and then fitted with a guide for comb-building. The guide is of wax and is called wax foundation. Full sheets of worker foundation are advised in preference to narrow strips of foundation called 'starters.' Sections from 'starters' are usually less regularly built, and have more drone cells than is the case with sections fitted with full sheets. Because of the presence of drone cells in 'starter' fitted sections, the use of the queen excluder is imperative. The queen is rather fond of drone comb during the early summer, and should any be present in the supers there is likely to be brood there as well as honey, unless the queen be excluded.

The sections after being prepared are packed into a section rack, with a separator, sometimes made of wood and sometimes tin, between every two rows. The purpose of the separator is to prevent the sections being joined together by brace combs, and also to force the bees to build more regular comb surfaces.

As well as regularity of comb surface, the beekeeper, when producing sections, will want the cappings of the honey cells to be as white in colour as possible. They are often a beautiful white at first, but the initial whiteness may disappear if the section rack be left on the hive too long after it has been completed. This is due to the bees' habit of varnishing the surface of the honey comb. This in no way adversely affects the honey in the cells, but only tends to spoil the appearance of the section. The removal of the section rack from the hive soon after its completion is therefore advisable.

Also, the quality of the sections will be influenced by honey-flow conditions. A heavy honey-flow will produce sections superior in comb-building, colour of cappings, and weight, to those produced during a light or intermittent honey-flow.

Strain and race of bee, too, will have an influence on results. Some colonies of bees may be much better comb-builders than others. Black bees generally are superior in this respect to the yellow bees of the Italian variety.

There may be some disadvantages to the beekeeper when producing sections. Frequently, when the honey-flow has stopped rather suddenly owing to the appearance of unfavourable weather conditions, the bees have to leave quite a number of sections unfinished. These, of course, could be placed in the extractor and the honey taken out. Also, a section is unsaleable if pollen has been stored in any of the cells. A section will be unsaleable, too, if the honey has granulated. Honey cannot be liquefied in the comb by heat so easily as when in a bottle or tin container. Because of the granulating properties of honey, beekeepers have to place their sections on the market early. In fact, honeys that are known to granulate quickly, and some do so much more quickly than others, should not be produced in sections at all, but in the extracted form.

### EXTRACTED HONEY.

The production of extracted honey is becoming more popular with beekeepers. The methods of production in most cases fit in more readily with methods of swarm control than is so with comb honey production. Also, when the honey has granulated and it is desired to bring it back to the liquid condition, it can be easily done by immersing the container in hot water. With care, extracted honey will keep indefinitely, and does not require to be rushed on the market. Compared with section honey production, however, more labour is involved by the extracting, straining, and bottling processes. Also, the initial outlay by the purchase of an extracting outfit is greater. In the end, however, extracted honey is likely to be more profitable, because more of it can be produced, and because there is less waste.

The extracting supers may contain shallow extracting combs, or deeper ones of the British standard size, ordinarily used in the brood-chamber. When fitted with foundation, the frames should be spaced  $1\frac{1}{2}$  in. approximately from centre to centre, but as soon as the combs have been built out and a little honey stored, some of the combs may be taken away to allow for 2 in. spacing approximately from centre to centre of each comb. This will induce the bees to build the combs thicker,

which makes for more rapid and easier uncapping, preparatory to the combs being placed in the extractor. The 2 in. spacing for frames fitted with foundation is too great to begin with, for the bees will often begin filling in the space with combs of their own. In the end there is much irregularity of comb in the super, and much difficulty for the beekeeper. Built-out combs, however, may be given the 2 in. spacing right away, although even here there is still some risk of irregular building. Those beekeepers who insist on straight combs will even give built combs the  $1\frac{1}{2}$  in. spacing at first, but later, when storing

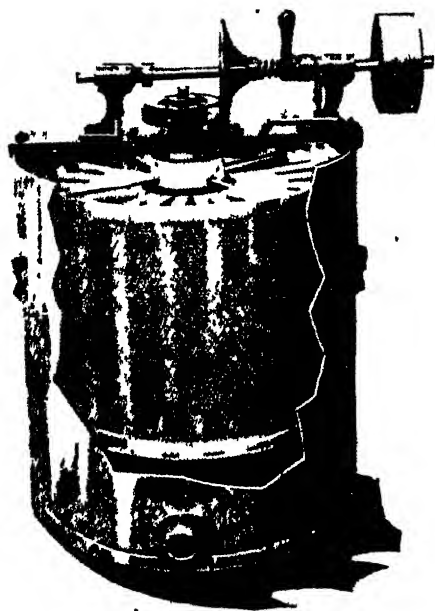


Fig 5.—Power-driven honey extractor to take 20 combs.

has made some progress, and before any sealing has been done, the spacing may be increased to 2 in. Shallow combs are usually preferred to deep combs for super work, because the super when full of honey is less heavy to lift and move about. In addition, the shallow comb is more easily uncapped. Extracting supers when filled need not be immediately taken from the hive as is done with sections, to preserve the whiteness of the cappings. The colour of the cappings in extracted honey does not receive consideration because the cappings have to be removed in preparation for extracting. In fact, the honey itself will be all the better for its being allowed to

remain on the hive for some time after sealing. Its viscosity is likely to be increased thereby. During a good season, however, there may be a shortage of supers in the apiary. Under these circumstances it may be necessary to remove supers from the hives immediately the combs are filled and sealed, to have the honey extracted, and the combs returned to the bees to be refilled.

Worker comb is preferred to drone comb in the honey supers; it is less attractive to the queen.

Extracting and straining should be done in a warm room. The high temperature causes the honey to run more readily. If it can be so arranged that the honey is extracted as soon as it is removed from the hive, and while still warm, it will leave the cells faster still. The straining process will be expedited also.

It is not advisable to extract too much unsealed honey along with sealed. Combs quite unsealed may contain some unripe honey, and it is not desirable to have this honey mixed with honey from combs that have been completely sealed, for fear of causing some deterioration of the product. Combs two-thirds sealed, however, may be extracted with fully sealed combs, but combs less sealed than two-thirds should be returned to the bees to be finished, if honey is still coming in, or the unsealed honey may be extracted separately.

The honey in the extractor will contain many wax particles, and these must be removed by straining. The strainer is a component of the honey tank, erroneously called a 'ripeners.' Before running the honey from the extractor into this tank, it is advisable to fix a piece of muslin or cheese-cloth, often double thickness, to the existing metal strainer, to assist in the finer straining of the honey. The honey should be left in the straining tank overnight, and in a good temperature, to admit of the air bubbles in the honey rising to the surface. Later, the honey may be bottled or run into tins.

For many years beekeepers have been accustomed to the use of a tall narrow bottle as a container for a pound weight of honey. It is a most inconvenient vessel for table use, owing to the difficulty of spooning the honey out at the lower levels. A shorter bottle but greater in diameter called the 'squat' is gradually gaining favour, because it admits of easy access to the contents. In time, no doubt, this more convenient container will displace altogether the older and taller type of bottle.

After the honey has been extracted, the wet sticky combs should be given back to the bees to be cleaned, that they may be in a fit condition to be stored until required next season. These super combs are most valuable to the extracted honey producer, for they save time and labour for the bees in comb-

building during the honey season, and help in making the production of extracted honey more profitable than that of section honey.

### REMOVING HONEY FROM THE HIVE.

The removal of honey from the hive is not such a difficult and disagreeable task as it would seem. For the beekeeper has the assistance of a most useful appliance which simplifies the operation by ridding the super of bees in a most ingenious manner. The super-clearer, as it is called, is a solid board the same in size as the bottom of the super, and, fitted into the centre is a flexible spring arrangement which forms a one-way passage for the bees. When honey has to be removed, the super is first of all taken from the hive temporarily, with the bees still adhering, until the super-clearer has been placed in position on the hive. The super is then put back on the hive, but over the super-clearer. The bees in the super do not relish being isolated from the rest of the colony in this way, and are anxious to leave the super. They soon discover the escape arrangement and file through into the main part of the hive underneath. If the super-clearer is placed on a hive in the evening, there should be few bees left in the super by morning. Or *vice versa*, if it is made use of in the morning, all the bees should be out of the super by evening. The honey can then be removed without any interference by the bees.

As it is a one-way escape, care should be taken when placing the super-clearer on the hive that the right side is uppermost, otherwise, the bees will have no means of getting out. In fact their numbers will be added to from below.

The super-clearer has another passage-way near the edge, only made use of as a rule when extracting combs have to be cleaned by the bees. The passage-way is opened by the beekeeper to admit the bees into the box containing the combs. It is allowed to remain open until the combs have been cleaned, when it is closed. The bees are then forced to leave the box by the escape and are not able to return. The combs may be removed when completely cleared of bees.

### UNITING OF BEES.

The uniting of bees can be a most useful and profitable manipulation. It may be necessary to unite two, and at times even more colonies. It may be practised any time during the season. Care, however, must be observed to prevent the bees from fighting. A fruitful source of trouble of this kind is mid-day uniting. To unite during the day is to treat

chiefly the house bees. It is the untreated foragers of both colonies returning from the fields and entering the same hive that make trouble. The evening, therefore, when the bees have ceased to fly for the day is the best time for the operation. One can be sure then of getting all the bees of both colonies into the same condition favourable to a peaceful union.

Colonies to be united, if standing some distance apart, should first of all be brought close together. This may be done by moving one of the hives, or both, whichever is most convenient. The movement should be a gradual one, two feet or thereabouts each day, but only on days when the bees are flying freely. The exercise of care in the movement of the hives is necessary that the bees may mark each new or intermediate site and be thus able to keep in touch with their home. The two colonies may be allowed to stand alongside each other until a time convenient for the operation.

The newspaper plan of uniting is the one recommended, because of its simplicity and certain success if ordinary care be observed. A single sheet of newspaper, free of holes, is placed over the brood chamber of one of the colonies, and the other colony set on top. The two colonies are now separated from each other by the newspaper. The bees will make holes in the paper and unite gradually. If the weather is warm, some attention ought to be given to the need for ventilation in the colony above the newspaper. All the quilts on the top should be dispensed with except one, and this should be very light and not too closely woven, that hot air may be allowed to escape, but no bees. Or, better still, perforated zinc fixed down with drawing-pins may be used.

After uniting has taken place, if it is so desired and is convenient to do so, all the brood and the best of the other combs of both colonies may be placed in one of the brood-chambers and the other brood-chamber and surplus combs taken away. If, however, the united colony is a strong one, the bees may be left with the double brood-chamber.

In the newspaper plan, the problem of dequeening one of the colonies preparatory to uniting need not arise unless the beekeeper has a preference. The bees may be left to decide which queen they want. If it is decided to dequeen, it should be done on the day that uniting is to take place. The older queen under ordinary circumstances should be the one taken away.

It is impossible with some of the older types of hives to place one brood-chamber over the other as in the newspaper plan. Uniting in this case involves more labour and a greater risk of fighting, for it means transferring the combs one at a time from one hive to the other. The combs not actually needed by the bees at the time should first of all be eliminated



from both hives, and the remaining combs—*i.e.*, combs of brood and store combs—spaced out widely, and then left like this for almost fifteen minutes, that the daylight may stream right down to the floor of the hive. This tends to upset temporarily the organisation of both colonies, a condition favourable to a peaceful union. The combs can now be transferred, and at the same time alternated—that is, the transferred combs are placed between every two combs in the other hive.

If one of the colonies is broodless and queenless, no alternating of the combs as already explained should take place. But the broodless bees should be divided in two, one-half of the combs being placed at one side of the queenright bees and the other half at the opposite side, the queenright colony with its brood being left undisturbed in the centre. As a precautionary measure it may be advisable to cage the queen of the queenright colony on one of the combs before transferring the combs from the queenless colony. She may be allowed to remain caged for two days, or until the bees have settled down.

An apparently queenless colony when about to be united should first of all be carefully examined to make certain that it does not contain a virgin queen or queen cells. These, if present, should be removed before union with the queenright colony takes place.

#### REQUEENING.

Artificial requeening—*i.e.*, the introduction of a new queen to a colony of bees by the beekeeper—is in contrast to natural requeening by the bees themselves. The supersedure impulse, when the bees rear a new queen to take the place of an older one, is simply nature's way of requeening and maintaining the vitality of the colony. This change of queens in a natural way is more common than is generally supposed, and particularly so in strong colonies. Yet beekeepers apparently forget about this interesting occurrence, or take no notice of it. They believe, and rightly so, that the queen of a strong colony, having had more work to do in egg-laying, is likely to be exhausted sooner than the queen of a small colony. A system of artificial requeening is therefore in practice among some beekeepers, whereby colonies are given a new queen, in some cases every year, and in others every two years. We believe that under this system many young queens reared by the bees under the supersedure impulse are destroyed in mistake for older queens, and their places taken sometimes by inferior queens, especially if these have been imported. If the beekeeper encourages the production of brood in forward colonies during the spring and early summer, by the

use of the larger brood-chamber, these strong colonies in most cases will requeen themselves naturally more readily than weaker colonies. And there will be less need for the beekeeper to worry himself with the artificial method. Artificial requeening is certainly a useful manipulation at times, but it should not be practised systematically. It is time enough to introduce a new queen when the bees have failed to do so themselves, and when the colony is getting into a backward condition. But so long as the colony remains strong in bees, any interference with the queen is condemned.

There are many methods of introducing queens, but it would take too much space here to describe them all. They may be found explained at length in the beekeeping textbooks. The methods range from those, of which there are several different ways, of caging the new queen in the colony temporarily, usually for two days, to others more direct and without caging. Few methods are 100 per cent safe. Unless care is observed, the new queen may be rejected or killed. Queenright colonies to be requeened should first of all be dequeened. Colonies that have been apparently queenless for some time should be carefully examined for queen cells or a virgin queen, and these, if found, removed before introducing the new queen.

A queen in laying condition—*i.e.*, one who has been laying right up to the time when she is prepared for introduction to another colony in the same apiary, is usually more acceptable to the bees than a queen who is out of condition. A typical case of a queen being out of condition is that of one who has been in the mails for several days, and with no opportunity of laying eggs.

New queens are more readily accepted, also, if nectar is plentiful. Should nectar be scarce at a time when it is desired to introduce a queen, the colony may be fed with syrup for two or three days prior to the introduction.

#### WINTERING OF BEES.

Success in the wintering of bees in this country depends almost entirely on the condition of the colony itself; the climatic conditions of the season having little or no influence.

Apart from the incidence of disease, there are four essential factors for good wintering: the colony must first of all be queenright; secondly, it should be strong in bees; thirdly, it should have ample stores; fourthly, it should be housed in a dry and waterproof hive. These are, in fact, fundamental factors, and are applicable to the management of bees at any period of the year.

A fertile queen is necessary that the bees may winter con-

tentedly and quietly, and also that brood-rearing may begin as early as possible in the spring. Should the queen be missing, the bees will never form a quiet and compact cluster. Their restlessness will result in the dissipation of their reserves of energy at a time when they ought to be conserving these for the coming of the new season in the spring. Every queenless colony does not die before the arrival of spring, but should it survive, it is likely to be in a weakened condition and with no prospect of replacing losses because of the absence of brood-rearing.

The colony should be strong in bees, that a good cluster may be formed during winter. A large cluster will be able to conserve the necessary heat better than a small cluster. For this reason small colonies of bees on three or four combs should be united to other colonies in the early autumn.

The quantity of stores for winter is important. In fact the combs should contain sufficient for the needs of spring brood-rearing as well as for wintering. A larger brood-chamber than that of ten British standard combs will usually be found to contain the required amount for both winter and spring. At any rate, it is well to make an examination of the brood-chamber early in September to ascertain the amount of stores. There should be no less than 30 lb. If it is remembered that a British standard brood comb when filled with honey weighs 5 lb. and a shallow comb 3 lb., both approximately, it should be possible to arrive at a fairly close estimate of the amount of stores available. Beekeepers of experience, however, are not likely to go to all this trouble. They should know at a glance when the colony is well provided for. If it is thought that there is a deficit, then it should be made good by feeding to the colony a rather thick syrup in the proportion of  $1\frac{1}{2}$  parts granulated sugar to 1 part of water. The water may be boiled alone and then poured in amongst the sugar. Stirring will assist in the melting of the sugar. The syrup should be supplied to the bees in rapid feeders. The bottle type of feeder should not be used for autumn work. It makes feeding, especially if much feeding is necessary, a long-drawn-out process, sometimes running into cold weather, when the bees may be unable to ripen the food. For this reason, feeding should be expeditiously carried out, and should be finished with before the end of September. The feeders should be filled in the evening. Day-time feeding may induce robbing.

The hive should be sound, with no possibility of water reaching the bees. The roof, the most vulnerable part, if not in a good state of repair, may be covered with roofing felt. The height of the entrance should be adjusted to a quarter inch to keep out mice. The width of the entrance may be anything from two inches to six inches, depending on the situation of the hives. If the hives are much exposed,

the width should be less than in hives that are well sheltered. The hives may be roped to pegs driven into the ground to prevent their being blown over by strong winds. A wind-break, as supplied by a hedge, low trees, or wall, will help in the protection of the hives and bees.

#### PRODUCTION OF HEATHER HONEY.

For the beekeeper in search of a good harvest of this delectable honey there are several difficulties. Only a small proportion of the beekeepers are situated permanently in heather locations. The others are forced to move their bees,



Fig 6 —(On the Moorfoot Hills for the heather honey harvest

in some cases thirty miles, and even more, to suitable forage. This, however, is not quite the difficulty it used to be. By the aid of motor transport, hives may be moved thirty miles in one and a half hours, whereas years ago the same journey took many hours, and with more discomfort to the bees.

A good single-walled hive of the "Wormit Commercial" type, or of the "National" pattern, is best for heather work. It is more easily prepared for moving, and gives less trouble on the journey than a double-walled hive.

Another difficulty is the seasonal condition of the colony. And this, after all, is the crux of the problem so far as management is concerned. If success during the early and mid-season honey-flows is dependent on a large force of foraging bees in each hive, the same applies to this autumn honey-flow

from heather. But unfortunately the peak of strength in the honey-producing colonies of the summer is past before this end of season honey-flow opens. Consequently, the foraging force is considerably reduced, due, in the first instance, to the heavy mortality, because of the intensive work of collecting and storing of the previous weeks. It is due, secondly, to fewer replacements, because of a rapidly shrinking brood area.

This smaller space required by the queen for egg-laying during August and September raises another difficulty. It is an inducement for the bees to store honey in the brood-chamber, sometimes to the neglect of the super.

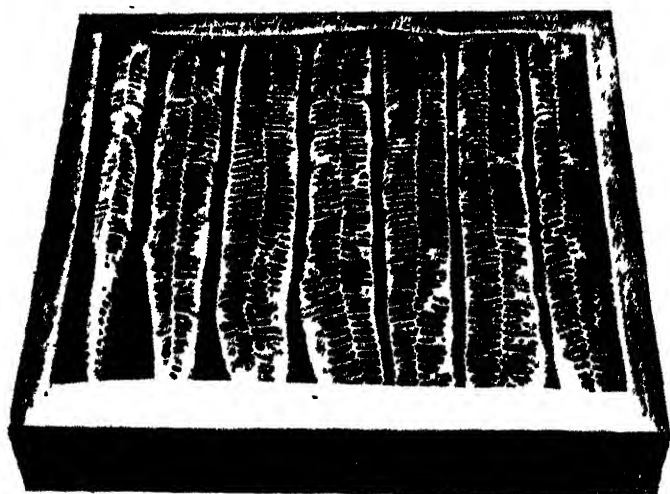


Fig 7 — *Super or cup of heather honey ready for market.*

These are points of great importance that ought to be understood by all heather-going beekeepers. Too often it is a case of hives being taken to the moors so long as they contain bees, the colony condition receiving little or no thought.

If the honey-producing colonies of the summer are naturally less strong at the beginning of August when the heather season opens, they should, for the purposes of heather honey storing, be made stronger by artificial means. This may be done by uniting to such colonies nucleus colonies with brood and young queens. Or any other suitable colonies may be made use of for uniting.

Parent colonies of early season swarms are exceptions.

With their young fertile queens, these colonies, having built up on the mid-summer honey-flows, are usually at their best about the beginning of August. These may not require any strengthening before going to the moors.

The brood-chamber should contain as much brood as possible, with the end combs well filled with honey. Without these reserves of stores, the bees might be in danger of starvation should the early part of the heather season be spoiled by bad weather.

Supers may consist of sections, shallow combs for pressed honey, or fixed comb supers or caps, as they are sometimes called (Fig 7). The demand for these latter, however, is somewhat limited, because the whole super of honey is sold as it

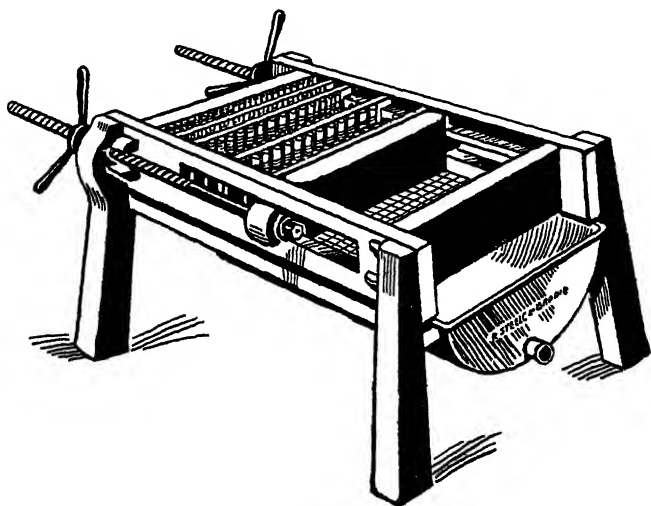


Fig. 8.—Heather honey press.

stands. The weight of this super will vary from 12 lb. to 20 lb., depending on the size used. The boxes are usually made by the beekeeper himself and fitted with bars spaced about two inches from centre to centre. To the underside of each bar is attached, by molten wax, a 'starter' of foundation about 1 inch deep. This provides the bees with a guide for comb-building.

For the best heather, a location amongst the higher hills should be selected. At the higher altitudes there is a much better prospect of obtaining purely ling honey, a truly excellent honey, so gelatinous that it will not extract from the combs in the ordinary way by centrifugal force; to separate the honey from the wax, the combs require to be pressed. On the low-lying heaths a mixed product is usually harvested of ling,

bell, and other honeys sometimes light in colour. Bell honey is not so thick as ling honey, and extracts readily.

In preparing for transport, great care is necessary to prevent the escape of bees on the journey, and also that they may be in no danger of suffocation, but will be as comfortable as possible under the circumstances. The floor, brood-chamber, and supers, should be held rigidly together by a perpendicular bar screwed to each side of the hive, with a screw going into each component part. The entrance may be closed altogether, and ventilation provided at the top by nailing a sheet of perforated zinc on top of the super. The bees should be shut in late in the evening and the hives moved as early as possible in the morning. The shorter the period of confinement, the better it will be for the bees.

When the hives are set down on the moor they should be arranged somewhat irregularly instead of in a straight line (Fig. 6). This arrangement will enable the bees to mark their respective hives much better, and will prevent the drifting of bees into strange hives.

# HUNTER BREEDING IN SCOTLAND.

By **LIEUT.-COL. ALEX. J. KING, C.M.G., D.S.O.**

WITH A NOTE ON

## THE FINANCIAL ASPECT OF HUNTER BREEDING.

By **Major C. H. SCOTT-PLUMMER** of Sunderland Hall.

IN writing this article I do not wish to pose as an authority on Hunter Breeding, but having been Chairman of Light Horse Breeding in Scotland, under the War Office, for some years, I have had opportunities of watching the efforts of others, some with success some without, and I am quoting from the writings of those who know what they are writing about, and who have very kindly given me permission to do so.

Many people in England have an idea that hunters are not, and cannot be, bred in Scotland. A man comes up in the autumn to shoot; he gets into the train in London in the dark and wakes up the next morning among, say, the mountains of Perthshire. On going up the hill to the butts he is given an ungroomed, grass-fed garron to ride. The saddle does not fit, and is probably a discarded old Yeomanry one, which slips over the pony's withers on going downhill, or whenever he stops to grab at a mouthful of grass or have a drink in a burn, which he does whenever he gets the chance. The same man returns to England by night, having seen nothing but hills and heather, and has no knowledge of the grand sporting, hunting country which he passed through in the dark; he takes away with him the idea that the only horses bred in Scotland are Clydesdales, Highland Ponies and Shetlands.

Another point that many people in the south do not know, or at least do not realise, is that Light Horse Breeding of the present day is greatly indebted to the Stuart Kings for giving us the forebears of the present thoroughbred. It was King James VI. (James I. of England) who imported the great "Markham Arabian" and instituted Newmarket as the headquarters of racing, and King Charles I. who imported a number of Arab and other mares which were called Royal Mares. He himself constantly rode races at Newmarket.

From the stock of "Beyerley Turk," imported in 1689, "Darley Arabian," 1706, and "Godolphin Arabian," 1730,



our present day thoroughbred comes. At least the thoroughbred of to-day, in the Stud-Book, traces back to one or other of those three horses (chiefly from "Darley Arabian"). It is the blood of the thoroughbred that gives us the hunter of the present day, but how the hunter has evolved is a much discussed question. The indigenous breeds of Great Britain were undoubtedly very small, and roamed about the forests, but when one sees pictures of Knights of olden days in heavy armour, both on man and horse, it appears they rode great heavy horses of the Percheron type; these horses must have been big, to carry the enormous weight, but apparently pace was not essential. These horses must have been imported, and gradually by the admixture of Arab blood the heavy horse became lighter and the native pony heavier, hence the origin of the old-fashioned 'Devon Pack' horse, the Welsh Cob, and the old-fashioned Norfolk Hackney, and what is termed the 'Half-legged' horse, &c., the mares of which have been crossed with the thoroughbred.

Hunting in the early part of the eighteenth century, and previously when there was hunting, was a very different thing from what it is now. The hounds were chiefly of the old southern type, and the men rode to hunt, and did not hunt to ride. That is no use nowadays. The present generation want to get along, hounds are faster than they were, and so naturally the horse must be fast to be able to live with them, which means more 'blood.'

Different countries require a different stamp of hunter. The small, butty, cobby sort that is essential in parts of Wales, Devon, and Cornwall would be useless in the Midlands of England or in most of the hunting counties of Scotland. Conversely a big, raking, blood horse would be unsuitable in many of the rougher counties in England and Wales.

There are many people who say that a special breed of hunters of a fixed type should be aimed at in breeding, as in the case of Clydesdales, Shires, Suffolks, Hackneys, &c. I do not see how this could ever be accomplished, in view of the great variety of hunting counties, and the different weights of the riders, &c., but whatever the country may be, 'blood' to a greater or less extent is required, and this must be got from the thoroughbred.

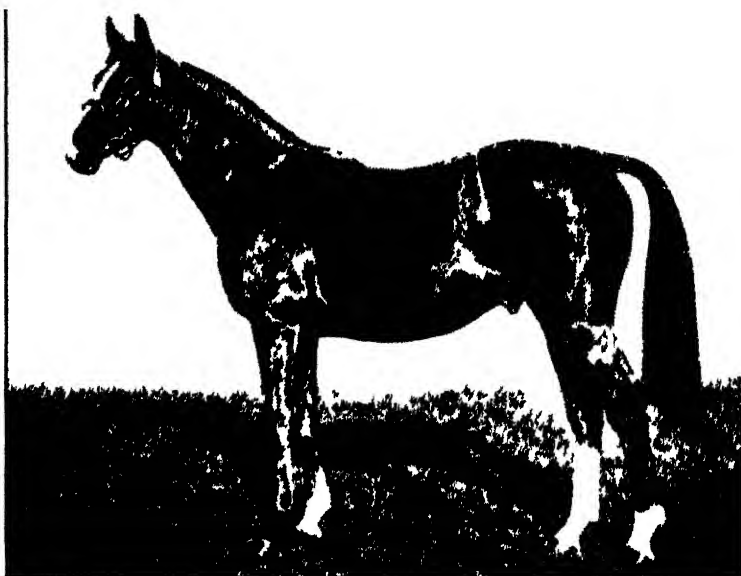
The majority of hunters now bred in Great Britain (excluding Ireland) are got by the Thoroughbred Premium Stallions, serving mares at a small fee, which are placed out in different districts under the Hunters' Improvement Society. The origin of these Premium Stallions is the old King's Plates, which were started by King Charles II., in 1665, and run for at Newmarket over four miles, in heats. These continued, but under different conditions, during the reign of Queen Victoria, and were called 'Queen's Plates.' In 1887

they were discontinued, and the money, which amounted to £5100 per annum, was handed over to the Royal Commission on Horse Breeding, when premiums of £200 each were given to approved Thoroughbred Stallions to travel the country at a small fee. Of these premiums Scotland was allotted three. In 1911 the Light Horse Breeding was taken over by the Ministry of Agriculture and Fisheries, and the annual grant was increased to £40,000. The usual number of premiums allotted to Scotland was six, up till 1913. During that period there was a special class for Stallions to go to Scotland at the Islington Stallion Show, but the stamp of horse entered in the Scottish class was so poor (the owners of Stallions in England, in ignorance, thinking the quality and quantity of the Scottish mares were not worth sending a good horse up for) that this was discontinued. From 1913 eleven Scottish Premium Stallions were selected from the 'Reserve' Stallions at the Islington Show, by special Scottish Judges. Naturally this seemed to the breeders in Scotland like being given a 'back seat,' so in 1922 the Scottish Board of Agriculture broke away from the English Board and no premiums were awarded that year. In 1923, under the War Office, which had taken over the Light Horse Breeding Schemes from the Ministry of Agriculture and Fisheries, four premiums were again allotted to Scotland. There was this important alteration, however, that the Stallions for the premiums were allowed to be selected from anywhere in Great Britain, and the premiums were awarded privately by two Scottish representatives, previous to the Islington Show, so that these horses did not go to the Show for their awards. This arrangement exists at the present time, and the result has been that instead of a most indifferent class of horses coming to Scotland, we have had travelling here, in the last few years, the following Premium Stallions:—

- "Gay Lally," winner of the Champion King's Cup at Islington in 1920, 1921, 1922, 1923, and Reserve Champion in 1924, 1925. This horse travelled Roxburghshire, Selkirkshire, and Berwickshire. (Fig. 9.)
- "Scarlet Rambler," winner of Champion King's Cup at Islington in 1924 and Reserve Champion in 1920, 1921, 1922, 1923. This horse travelled Fife. (Fig. 10.)
- "Ardavon," winner of Champion King's Cup at Islington in 1925, 1926 and Reserve Champion in 1927 and 1934 (when again sent to Islington to travel in England). This horse travelled Fife. (Fig. 11.)

Other Stallions that we have had in Scotland under this arrangement have been "Cock-a-Hoop," "Top Covert," "Hunty Gowk," "Periosteum," "Aynsley," "Warrington," "Quite," "Chelsho," and "Corbridge." All of these got

Super Premiums at Islington Show. Those that did not go to Islington were "Barbican," "Pennant," and others. Last season we had in Renfrewshire and Ayrshire (and have again this year) "Brian Water" by "Spearwort" by "Spearmint" by "Carbine," which was purchased by Mrs Parsons after he won the Championship for Thoroughbred Stallions at the Dublin Show in 1934. These Stallions have to serve half-bred mares, at a service fee of £2 per mare, in the district for which they are allotted premiums; for thoroughbred and other mares outside their own district the



W A RITCHIE

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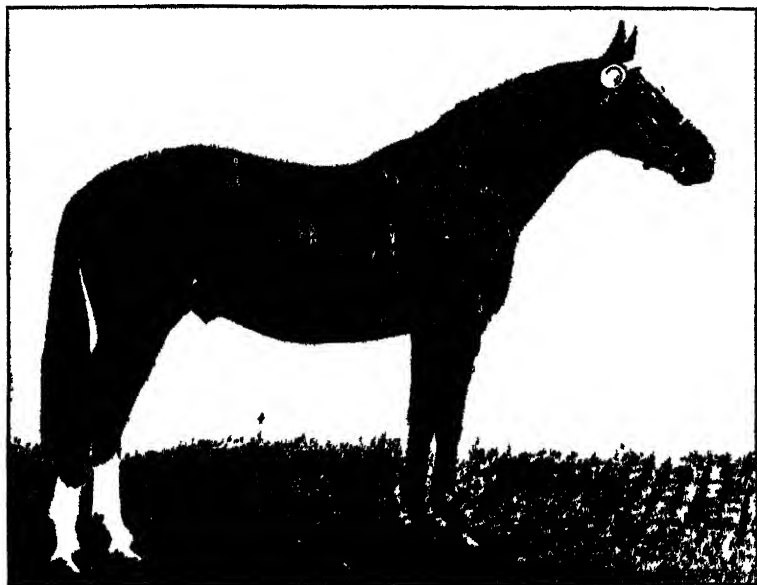
Fig 9 — "GAY LALLY."

Winner in 1920, 1921, 1922, and 1923 of "The King's Champion Challenge Cup" presented by His Majesty King George V

fee can be as the owner of the stallion decides. The money for these premiums at the present time is provided by a grant of £4500 from the War Office, and £5000 from the Betting Control Board—total £9500 (as against £40,000 in 1911). The premium to each Stallion is £125, and for specially approved horses between the ages of four and ten a few additional grants are given, making it up to £200. Besides this, the sire of the winning group of young horses at Islington Hunter Show is awarded £25, provided he himself is exhibited at the Show. Scottish Stallions are not eligible for this, as our horses do not go to the Show, but we cannot complain, as we are able

to get a far better class of horse by selecting our own independently of the Show.

We are greatly indebted to Mrs Parsons, Fordbank, Renfrewshire, The Buccleuch Hunter Breeding Society, Sir John Buchanan-Jardine, and Sir Robert Spencer-Nairn for their perseverance and expenditure in procuring the best Stallions available. Sir John Buchanan-Jardine has provided horses of his own for Dumfriesshire, which have been awarded premiums. One of these was "Harmonius" by "Amadis" out of "Love Wisely," and latterly "Hot Haste," one of the



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Fig 10. — "SCARLET RAMBLER"

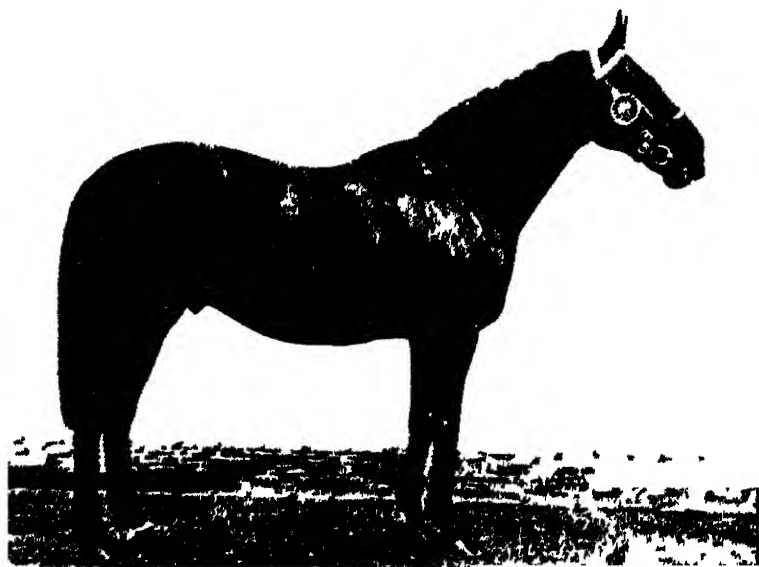
Winner in 1924 of "The King's Champion Challenge Cup" presented by His Majesty King George V

best bred horses in Great Britain, being by "Hurry On" out of "Cinna." Before "Harmonius" he had "Silver Crag."

So far I have been dealing with Premium Stallions, but apart from Premium horses Mr J. Robson-Scott of Newton has had standing at Newton in latter years "Fowling Piece" by "Carbine" (we have "Carbine" blood again in "Brian Water") out of "Galinne" by "Galopin"; "Ethereic" by "Littleton" out of "Ethereal"; "Viviani" by "Cylgad" out of "Vivid"; "The Haining" by "Hainault"; and "Too Eager" by "Eager." Previously there were "Perigord," "Sheen," "Gold," and "Be Very Wise." All these horses, besides getting numerous winners under Jockey Club

and National Hunt Rules, have sired numerous winners of Point-to-Point races and in the Show ring. Space does not allow me to enumerate many of his successful horses on the Turf, as I am dealing with Hunter Breeding, but we must remember the number of useful mares that his horses have sired and which are now carrying on this blood.

Mr Moffat S. Thomson of Lambden, Berwickshire, has had "Billidere" and "Sir Harry" standing at Lambden, and now has "Lone Knight" by "All Alone."



W. A. ROUGH ]

[Col. Wright.]

Fig. 11 — "ARDAVON."

Winner in 1925 and 1926 of "The King's Champion Challenge Cup presented by His Majesty King George V"

Among the many horses that have been bred in Scotland in the last few years, that are and have been hunters as well as Steeplechasers and Point-to-Point winners, are :—

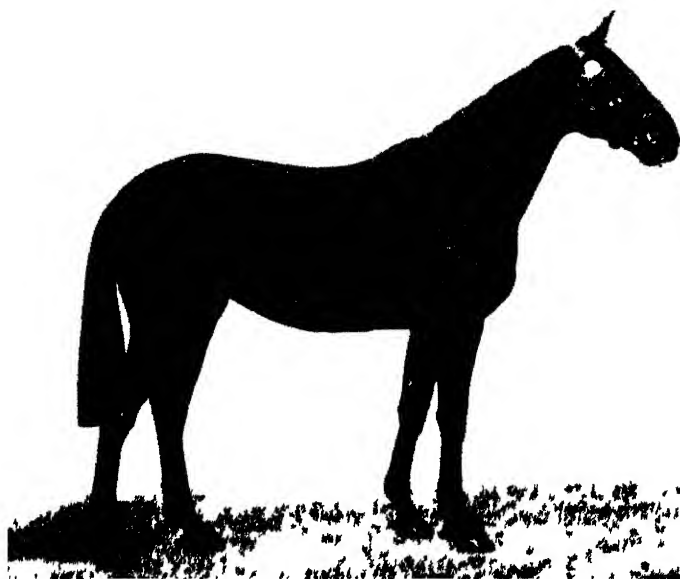
"Merriment" by "Lovely Thrush" out of "Supervision," bred, owned, and ridden in all his races (about thirty in all) by The Earl of Haddington. Amongst others, he won in 1931 the Northern Hunters Steeplechase at Catterick Bridge and the National Hunt Steeplechase at Cheltenham; in 1932 the Valentine Steeplechase at Liverpool; and in 1933 the Derbyshire Handicap Steeplechase at Derby. He also ran twice in the Grand National;

in 1932 he fell, but in 1933 he completed the course. Altogether he had eight wins, eight seconds, and four thirds.

"Border Chief" by "Fowling Piece," bred by Mr J. Robson-Scott and owned and ridden by Mr T. W. Robson-Scott, won many Point-to-Point races.

"Mak Siccar" by "Be Very Wise," bred by and belonging to Mr J. Robson-Scott, won three Hurdle races and several Point-to-Point races.

"Silver" by "Fowling Piece," bred by Mr J. Robson-Scott,



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Fig. 12.—"SPEEDWAY "

First Prize Two Year Old Hunter Filly, London Show, 1935, and as Three-Year Old in 1936.

owned and ridden by Mr T. Robson-Scott, won many Point-to-Point races.

A separate article could be written about the number of good horses that have been bred by Mr Robson-Scott at Newton.

"Black Pepper" by "General Stossel," bred, owned and ridden by Mr H. Falconer, Auchincrow, Berwickshire. Amongst the Steeplechases he won were the Buccleuch Cup, Kelso, The Eglinton Hunt Cup, Bogside, and about ten open Point-to-Point races in the south of Scotland

and north of England, including the John Peel Challenge Cup in Cumberland.

- "Billy Dear" by "Billidere," bred and owned by Mr Andrew Dunn, Redden, Kelso, won the Buccleuch Cup at Kelso in 1930, and again in 1935, the Farmers' Cup at Kelso, and about forty first prizes in the Show ring, including first and champion at the Highland Show in 1930 and 1931.
- "Fogo" by "Mon Bonheur," bred by Colonel Trotter of Charter Hall, Berwickshire, won many Point-to-Point races, including the Border Union Lightweight in 1931 and 1932; ridden by Mr H. Trotter.
- "Salvo" by "Chelsho," also bred by Colonel Trotter, won the Foxhunters' Cup at Aldershot.
- "Tantoro" by "Tantamount," bred by Mr T. Young, Blink-bonny, and owned and ridden by Major Albert Thomson of Nenthorn, Berwickshire, won many Point-to-Point races and prizes in the Show ring. Major Thomson has been a most consistent and successful breeder, one of his best in latter years being "Simple Simon" by "Chelsho," well known in the Show ring and a Point-to-Point winner. The horses he hunts himself are almost all home-bred ones.

Mr Moffat S. Thomson of Lambden, Berwickshire, has bred:—

- "Flannelette" by "Hunty Gowk," first and champion at the Highland Show in 1919 and 1920, and second at Islington and the Royal.
- "Cherio" by "Gay Lally," first and champion at the Highland in 1921 and 1922.
- "Miss Murphy" by "Billidere," first and reserve champion at the Royal, and first and champion at the Highland in 1923.
- "Young Pretender" by "King's Proctor," first at the Highland in 1922 and 1923, and a winner under National Hunt Rules.
- "Sky Pilot" (now "Air Pilot") by "True Blue," first and reserve champion at the Highland in 1929 and 1931.

Mr A. Paton of Whitehill, St Boswells, has been a very successful breeder, one of his best horses being "Valentine" by "Hunty Gowk" out of "Patience II." by "Billidere," and a half-sister was "Miss Milligan" by "Chelsho." Both of them won many first prizes at the Border Union and Buccleuch Hunter Shows. The dam of "Patience II." was "Patience I.," a very small mare, but a 'big little 'un,' a wonderful hunter and a good example of a small mare with quality and substance breeding big upstanding horses.

To go farther west, we find many Show ring winners which were bred and owned by Sir John Buchanan-Jardine of Castle Milk, Dumfriesshire :—

- "Sepia" by "Harmonius," first at the Highland Show in 1927, 1928, and 1934.
- "Glenholm" by "Harmonius," first and champion at the Highland Show, and second at the Royal 1929, and premium at Islington in 1929 and 1930. Won the Dumfriesshire Members' Point-to-Point in 1932, 1933, and 1934.
- "March Brown" by "Harmonius," first at the Highland and Royal Shows in 1930.
- "Harmony" by "Harmonius," first and champion at the Highland in 1932, and second at the Highland and Royal Shows 1933, and premium at Islington 1934.
- "Hasty Bob" by "Hot Haste," first at the Highland and the Royal 1935, premium at Islington 1934-35, and First Prize 1936.

This owner has had several other winners at the Highland.

Another animal that is making a name for herself is "Speedway" (Fig. 12) by "Hot Haste," bred and owned by Captain J. Steel of Kirkwood, Dumfriesshire, which last year as a two-year-old was first in her class at the Highland, the Royal, and Islington Shows, and this year, as a three-year-old, first at Islington.

Again, in Dumfriesshire, we have had many useful hunters and Point-to-Point winners bred by Mr J. J. Paterson, Terrona, whose "Jaunty" by "Sheen Lad," well known on both sides of the Border, has won for him many Point-to-Point races, having been first or second in something like fourteen or sixteen races.

In Renfrewshire and north Ayrshire many good hunters are now being bred. It is only in recent years that a thoroughbred stallion has been travelling in that district, so the young stock have not yet had much chance of distinguishing themselves, but Mrs Parsons of Fordbank has bred many winners in the Show ring in the west of England as well as in Scotland. Those shown in the west of England, at the Bath and West and other Shows, were all bred at Fordbank, but sent to Somersetshire as being a milder climate. Unfortunately, I have been unable to get a record of her winners.

In Fife, Sir Robert Spencer-Nairn has bred a lot of big, upstanding weight-carriers, which have been successful in the Show ring. With the exception of one filly, "Bride" by "Ardavon," out of a thoroughbred mare "Highly Delighted," which won a premium at Islington Show as a two-year-old in 1934, he has only shown his young stock at local Shows. Sir Robert is now turning his attention to breeding chiefly from



thoroughbred mares, which should be successful as his land appears to be most suitable; his young stock all grow to great sizes.

Also, in Fife, Miss Currie of Clatto has bred several winners at Shows other than local ones, all out of that great brood-mare "Meg Merilees." "Mark Anthony" by "Ardavon" was first and champion at the Highland Show in 1933. "Merry Ann" by "Ardavon" first and Hunters' Improvement Society Medal, Highland Show, 1933, and first and champion filly at the Great Yorkshire Show, 1933, and also premium at Islington Show, 1934. "Millbridge" by "Corbridge" was first at the Royal Show in 1935, and premium at Islington this year.

I have recently been re-reading some letters which were written in 'The Horse and Hound' on the "Shortage of Decent Horses" in 1926. Several of these letters criticise the efforts of the Hunters' Improvement Society, and say that too much money is spent on the provision of stallions which should be spent on mares. How could this be done with the very small amount of money available? A premium stallion (as I have said before) gets a grant of £125, for which he has to cover not more than 80 mares. There were in 1934 in Scotland, England, and Wales, 63 stallions receiving premiums which between them served 4121 mares. I have not got the figures for 1935. With the available sum in that year of £6500 (now £9500) in what way is it possible to assist the mare side of breeding?

I grant that many of the premium stallions serve mares that are really worthless for breeding and should never be bred from, but that is a question of supervision which seemingly cannot be arranged, though I personally think it could. As it is, a stallion owner sends his horse to a district (probably at some considerable distance away and at corresponding expense) and wants to get as many service fees as he can. In some cases he gives the leader a percentage on the number of mares his horse serves; consequently, some leaders go round and pick up any decrepit, old, worn-out creature, cart mare, milk cart pony, tinkler's pony, or any old rag-bag that will take the horse, in order to get his service book full.

There are many people who have mares of the right stamp for hunter brood mares, but they cannot bring themselves to put them aside for breeding until they are too old, and therefore useless for the job. I own it is hard for a man who has a real star performer, which carries him bang up to hounds, to put her aside for a season, but financially this is what he should do. Later on, when she is getting a bit slow and dicky, if she had had a foal previously, she could then be turned into a brood mare with the probability that she will breed again.

Unfortunately many, or I might say most, people keep on riding them as long as they remain sound until they are past breeding age, and consequently if they do happen to breed their stock are mostly 'wasters.' There are some extraordinary exceptions in thoroughbred stock, which I mention for interest only—not for encouragement. For instance, the "Old Tartar" mare had her first foal when she was twenty-six years old, and when she was said to be thirty-six she bred "Queen Mab," winner of races and herself a successful brood mare. "Look at me Lads" had her first foal at twenty, and bred twelve foals, her last being when she was thirty-three years old; "Catherina" had her first foal at sixteen years, and her last at twenty-seven years; "Black Agnes" had her first foal at seventeen, and had seven foals. I have no doubt that there are many more exceptions amongst half-bred and heavy mares, which are not recorded as in the case of thoroughbreds.

Again, there are many people who have really good mares of the right stamp to breed hunters from, which have met with accidents, or become unsound—not hereditary unsoundness. As they are not in a position to do it themselves, or have not the inclination or facilities to breed from them, they send them to the Kennels, or the Knackers, or dispose of them somehow. The Hunters' Improvement Society have "The Brood Mare Scheme," by which they ask for suitable mares to be given to the Society for breeding, and they buy as many as they can for the purpose; but unfortunately the amount of money available is very small. If people who cannot breed from them themselves would give them to the Society, they would be put out with farmers or others who can be relied upon to do them well (otherwise they are taken away), and they cannot be passed on to anyone else, or be got rid of without the permission of the Society. Thus the donors can always know where their mares are located, and that they are under supervision. The foals out of these mares are absolutely the property of the breeder, who can do what he likes with them. At present in Scotland there are unfortunately only about twenty mares under this scheme.

About a couple of years ago several letters appeared in 'The Horse and Hound' to the effect that encouragement was given to Hunter breeding by the provision of good Stallions serving at a small fee, but when horses were bred no assistance was given to the breeders to dispose of their young stock. Suggestions were made that the various Hunts should keep a register of the young stock which were available for sale in their districts. The Royal Caledonian Hunt, about a year and a half ago, instituted a Register of Hunting Stock for sale in Scotland, and the owners of young stock, and also of made hunters, who wished to sell, were asked to register

them at a very small fee. The list of horses so registered was sent to the Secretaries of all the Hunts in Great Britain, to London Clubs, to regiments at home and those under orders to return home, to dealers, and to various Institutions, and advertised weekly in 'The Field' and 'Horse and Hound.' The result, however, was so poor, the support given to the scheme by breeders so slight, and the expense so great, that it was decided to give it up. So it would appear that if a man is careful in what he breeds from, and has any ordinary luck, he can find a market right away without any assistance. In any case the Royal Caledonian Hunt have done their bit in trying to carry out the suggestions which were put forward by the breeders.

I always think a good deal more could be done by people who hunt in a certain district buying locally bred horses. A good example is set by the Buccleuch Hunt, where the horses ridden by the Hunt servants are nearly all bred in the district, and in the Dumfriesshire Hunt, where many of the Hunt horses are bred by Sir John Buchanan-Jardine, who is Master.

Another thing is, that breeders might make more of the opportunities offered them of showing their young stock at the Local Shows. Not only is it an advertisement of their goods, and those of the District, but it greatly assists the Show. I must say, however, that the Border Union Show at Kelso, and the Buccleuch Hunter Breeding Society Show at St Boswells, are well supported, and I think also, in later years, the one at Paisley. But as a contrast, at the Ayrshire Show at Ayr the entries are most meagre, sometimes a total of only five or six entries in all the three young stock classes, and yet there are quite a lot of young stock bred in the district, and some extra good stallions have travelled there for several years. Anyhow, the Highland and Agricultural Society Show is to be held at Melrose this year, which is a good opportunity for Scottish breeders to show the people in the South what can be produced in the North.

Nowadays, more than ever before, only the best class of hunter must be aimed at when breeding. For them the market is as good as ever, and even better than it was a few years ago, but they must be really good. The days when one could get rid of misfits for cabs, tradesmen's vans, tinker's carts, &c., are gone. Motors have knocked the bottom out of that trade, and where the misfits of the present day (and there must be a good proportion of them) go to is a mystery to me. The various riding clubs, &c., which I am glad to see are springing up all over the country, absorb a good many, and Hyde Park on Sunday mornings displays (unfortunately to the gaze of the foreigner) a collection of the very sort we wish to avoid breeding. Anyhow, as I say, more than ever

the question of the right sort of sire and dam comes in. Of course the type of horse to aim at is the big, blood hunter, that can carry fourteen stone (or over), as they always, if sound, command a price, but there is a market for the smaller horse also if he has quality and size. This may sound odd, but by size I mean a 'big little 'un,' a butty little horse of about 15.2, with good girth and back ribs, and a place to put his dinner in. Such can usually do far more than the 16.1 or 16.2 which is short of quality.

There are many men who, because they are of a certain weight, think they must ride great, lumbering, under-bred horses, quite ignoring the fact that blood carries weight far better than the common horse even though it may be a hand or so taller. To quote that good horseman, sportsman, and author, Major White Melville, in his most instructive book, 'Riding Recollections': "If you ask any celebrated welter to name the best horse he ever had, he is sure to answer, 'Oh! little so-and-so; he wasn't up to my weight but carried me better than anything else in the stable.'"

Looked at from the point of view of a man who breeds to sell, and who has to think of the market, a good big horse with quality is always more saleable than a good small one. Action carries weight, and it is the action of a blood horse that gets him through the dirt, and over the miles and miles of old grass in the hills of the Borders. A well-known judge was asked to mention the three most required qualities in a hunter; he replied: 1st, Action; 2nd, Action; 3rd, Action. When at Race Meetings I am, from habit, constantly on the look-out for horses that look like making useful country stallions. I see broadside on one which looks like being the very thing, but when he comes towards me he is, in most cases, a 'wash-out' entirely, as far as hunter breeding is concerned; he throws his legs all over the place and usually turns his toes out. This latter does not matter much in a racehorse, as those which turn their toes out usually gallop faster than those which turn them in, but it is fatal in a hunter, where the latter is the preferable fault of the two. Again, when one sees what looks like the exact stamp for a hunter sire, in most cases it turns out to be a gelding.

Now as to the stallion which, given the right sort of mares, luck, and good management, will breed the article that will pay to breed from. The sort of horse wanted in one district is different to that wanted in another, on account of the nature of the country and the type of mare prevalent there. Further, in the district itself, opinion as to what is required may be extremely varied. Everyone has his own ideals. Go to the Hunter Show at Islington, when the stallions are being judged for premiums, and hear what the critics at the ringside have to say; or go to Kelso Market, when a new premium stallion

is being paraded before the season opens, and listen to the remarks of approval and disapproval. However, putting local criticism on one side, there is no doubt that what is wanted for a thoroughbred country stallion is a short-legged, compact horse, with the best of shoulders, good girth and back ribs, and the best of broad hocks which are not too far away from him, good feet and good bone. The word 'bone,' to my mind, is rather a misnomer; there is really not very much difference in the size of the actual cannon bone of one thoroughbred horse from another; it is the breadth of the fore-leg under the knee, which is caused by the width of the tendons from the pisiform bones behind the knee down to the fetlock joint. Beware of a horse that is tied in below the knee or is back at the knee, or, so far as the hind-leg is concerned, that is pinched in below the hock. Nowadays everyone cries out for 'size,' meaning height. Height does not necessarily mean size, and a great lanky horse of about 16.2 (or more) does not breed any better hunters than a compact little horse of about 16 hands (or even less) that has substance as well as quality. In any case, to be a hunter stallion he must have the character of a stallion, with real nervous energy and full of 'vim,' and good temper. Among some of the best Hunter sires that we have had in Scotland in late years have been "Billidere," "Be very wise," and "Sir Harry," all quite small horses, but with substance and quality.

To quote Sir Merrick Burrell, who wrote that most instructive little book, 'Hints on the Breeding and Management of Light Horses,' on the selection of stallions, he says: "Choose a horse which has proved himself a good horse on the Turf, a horse that could go both fast and stay, which is sound after three or four years, next to him the sprinter, and last the horse that could win over long distances. It seems strange that the sprinter should be a better sire than the stayer for the purpose of breeding half-breds, but it certainly is so. As a rule they are much finer animals, being more muscular, bigger framed, bigger limbed, and possessed of better action." He then goes on to say, "Use a thick, muscular, short-legged, medium-sized horse in preference to an over-sized one. The latter are seldom good sires; a horse from 15.3 to 16.1 is amply tall enough."

I find in going round districts discussing stallions, that many breeders want a horse that has remained in training for about seven years and kept sound, and has won races up to the end; he also must have proved himself a good getter, and have bred good stock, and not be too old. Well, it is rather difficult to find many of such horses. To have raced for seven years means he must be nine years old before he is turned out of training; he is then ten years old before he has his first mare, and his first foal at eleven years; so before you can say

what his stock are like as hunters, he will be quite fifteen years old. There are, therefore, not many years before him to prove himself a popular horse. The maximum age for a stallion to get a premium under the Hunters' Improvement Society is twenty years. Many horses have got winners on the Turf after twenty to twenty-five years, but none of them of any great prominence. The most effective age appears to be between eight and fifteen years. However, notable exceptions have been "Stockwell," "Springfield," "Bend'or," and "St Simon." The latter, when twenty-four years old, got one of the highest percentages of foals of his many years at the stud, but none of them were ever very great. "Godolphin Arabian" (one of the founders of our thoroughbred) got "Matchem" when he was twenty-nine years, and "Matchem" lived to thirty-two years. In olden days, about 1820-1840, the most fashionable thoroughbred stallions served half-bred mares as well as thoroughbred—viz., "Voltair," 1826, and "Voltigeur," 1847. Later on "Emilius" (which was owned by Mr Udney of Udney Castle, Aberdeenshire, when he won the Derby in 1823), to quote 'The Druid,' was such a Don Giovanni that his last inamorata was a piebald pony. But there were no £500 service fees in those days!

In Scotland we unfortunately have very few thoroughbred stallions to send mares to, so cannot pick the one that is most likely to suit the mare. Unlike Yorkshire, Warwickshire, Devon, Gloucestershire, &c., where there are plenty within reasonable distance by road, rail, or otherwise, here a man has to take whatever is nearest to him and chance it, or send the mare a long way by rail.

The Thoroughbred Stallions which we have in Scotland this year (1936) are :—

- "Corbridge" by "Dairy Bridge," travelling Roxburghshire, Berwickshire, and Selkirkshire.
- "Purple Shade" by "Royal Canopy," travelling Dumfriesshire.
- "Brian Water" by "Spearwort," travelling Renfrewshire and North Ayrshire.

The above are Premium Stallions serving mares at £2 each and 2s. 6d. the groom.

Other privately owned Stallions, standing at their own stables and not travelling, are :—

- "Lone Knight" by "All Alone," belonging to Mr Moffat S. Thomson of Lambden, Berwickshire.
- "Star and Garter" by "Sunstar," belonging to Captain E. Brook of Kinmount, Dumfriesshire.
- "Plantagenet" by "Gainsborough," belonging to Sir Robert

Spencer-Nairn of Leslie House, Fife, and his "Ardavon" by "Ardoon."  
"Silver Squire," belonging to Miss Duguid of Manor, Aberdeenshire; this is a small horse of Polo Pony stamp.

There are also the very successful stallions belonging to J. Robson-Scott, Esq., of Newton, near Jedburgh: "Ethereic" by "Littleton," "The Haining" by "Hainault," "Too Eager" by "Eager."

These latter are mostly serving thoroughbred mares.

I am afraid there are a few others dotted about Scotland which will not do much credit to Hunter Breeding.

Every stallion travelling a district in Great Britain must be licensed by the Ministry of Agriculture and Fisheries, under the Horse Breeding Act, 1918, and be certified as being free from the following diseases and defects:—

- (1) Cataract, (2) Roaring, (3) Whistling, (4) Ringbones, high and low, (5) Sidebones, (6) Bone Spavin, (7) Navicular Disease, (8) Shivering, (9) Stringhalt, (10) Defective genital organs.

For this protection breeders are in great measure indebted to the late Lord Saltoun. Of course, if a man likes to send a mare to an unsound stallion, standing in his own stable and not travelling, he can do so, but it is at his own risk.

I think I have said enough about the sire, so will now turn to the mare. I will again quote Sir Merrick Burrell, who says: "Start with a young, sound mare, if possible not exceeding eight years old. If you can get a good-sized three-year-old filly do so. A good-sized strong mare with a remote pony ancestor is very hard to better, as this pony blood gives intelligence, hardiness, and great endurance. Faults in parents are extraordinarily apt to reappear in a worse form in their progeny. Height does not denote size or strength, but a brood mare should not be less than 15.2, and being over 16.1 is more of a disadvantage than an advantage. Avoid violent crosses—i.e., do not cross the heavy, soft-boned breeds with the thoroughbred with a view of breeding a good hunter. For every good horse bred on these lines there are a hundred bad ones, so again beware and do not be led astray by this exception."

In Aberdeenshire, for a few years after 1911, when the thoroughbred Premium Stallions were started, I saw quite a considerable number of very useful horses got by the thoroughbred out of small, quick, active Clydesdale mares, and bought several for the Army as Artillery horses. Some of them made quite useful weight-carrying hunters for men who did not require to go very fast, but they were exceptions. Gradually, as motor-cars came into use by farmers for going to market,

&c., the stamp of mare they used for that and for light work on the farms died out. So did the mares that were used for posting, which were of a very useful stamp for breeding, and accordingly a thoroughbred stallion had to be given up.

I have already dealt with the subject of keeping mares until they are too old to start breeding from, so will not repeat myself. A mare can be a bit long in the back, but beware of one with slack loins and no middle. I have seen many such being bred from, but they never bred animals worth anything. Captain Alec Campbell, in that very knowledgeable book of his, 'Horse-breeding Yesterday and To-day,' says: "Experience has taught me that there is only one part of a mare that should, and must, be big enough—that is her belly. I'd far rather breed from a spindle-shanked mare with a 'vast belly' that one with great bone, short backed, and a pinched-in belly." Personally I find that, in the case of a mare given to or bought by the Hunters' Improvement Society, which I have to place out for breeding, I am first asked what height she is; if I say she is about 15.2, I am told she is not big enough.

In quoting what Sir Merrick Burrell says about pony blood, I will mention Mr J. Robson-Scott's mare "Pepita" by "Playmate," which won the Buccleuch Cup some years ago. She was descended from a Highland pony which was crossed with an Arab stallion, and the same owner's "The Gift" by "Master Walter," "Alpha" by "Battlefield," and "Perigord II.," all winners as well as hunters, were descendants of a Welsh pony.

Having got the right sire and the right sort of mare to breed from, the next question is, have you the right sort of land? The ideal, of course, is limestone, but there are many districts not on limestone which breed good hunters. It should be light, dry, good old upland, that has a dry subsoil, or is well drained; that is the best; undrained marls and clays, as well as boggy or heather lands, are the worst. Horses do not require rich land, but thrive far better on short, sweet, crisp, hard grasses of uplands. I should say, as far as Scotland is concerned, the best example we have is at Mr Robson-Scott's of Newton near Jedburgh, where mares and young stock have unlimited liberty. This land is strong loam and has a lot of lime in the water. Sir Robert Spencer-Nairn's land at Leslie, Fife, produces horses of great size and strength, which I think is attributable to limestone. Where many mares have to be kept in a more or less confined space, the land is inclined to become 'horse sick,' and should be grazed in turn by horses, bullocks, and sheep, one following the other, not all together as is sometimes done. The horses soon pick out the sweet grass they like, and leave the fields patchy by ignoring the coarser grasses which the bullocks will eat. But



it is very necessary to remove all horse droppings, if there are many horses together, as they sour the grass and soon make the place 'horse sick,' and constant applications of lime are needed.

It appears to me that breeders are far too casual in taking it for granted that when a mare has once been served she is in foal, without taking the trouble to try her again. In the case of a travelling stallion it is often difficult to meet him on the exact day when the mare is really ripe for service; although she may seem to be dead in use, and will take the horse, it does not follow that she is really ripe, as the ovum (or eggs) are only down for a short time. A mare usually comes in use about the ninth day after foaling (some sooner and some later), but after that most mares come in use every three weeks until they are pregnant. It is not safe, therefore, to consider that she is in foal until about three weeks from the time of the last service. Mares should not be too fat at the time of service, as then they are difficult to get in foal; this is particularly the case with maiden or barren mares. In the case, however, of in-foal mares it has to be remembered that the feeding she gets has to supply two of them, and if you starve the mare you are starving the foal which is inside her, and which, if not nourished, will be a weakling. Hints on breeding, &c., again says: During the greater part of the time she is in foal light and unexciting work will not hurt her. Never keep a brood mare without sufficient exercise. If she is not doing light work she should be turned out to graze and so exercise herself. Feed her well on good sweet hay with a feed of oats morning and evening. In the winter keep her soft and sappy, give a bran mash mixed with oats and chaff three nights a week, and two or three carrots. The more she is exposed to cold and bad weather the more oats she will require to keep her warm. If the land is wet bring her into a yard with a shed in it or into a box at night so that she can be fed and rest in the dry.

With regard to Slipping and Sterility, Mr William Day, the trainer, in his book 'The Horse,' says there can be no doubt that Slipping is a disease and that it is to a great extent hereditary. In mares predisposed to Sterility, this defect will be discovered in the first year or two as a rule. Likewise, mares disposed to slip their foals will exhibit this tendency at an early period. The same applies to those that have twins, and he quotes many cases of thoroughbred mares which support this theory. He goes on to say that he has noticed that mares which have slipped their foals are barren twice as often as those that have not been so affected. In any case, whether slipping is caused by an accident or is inherited, in-foal mares should be kept away from barren ones or geldings, which disturb them and make them gallop about, and in-foal

mares should not be allowed out when there is any frost on the grass.

The secretion of milk, appearing some time before the mare is due to foal, often means that the unborn foal is not doing well, or in some cases indicates that there are twins, one of which is dead. A single dead foal would be aborted, but the fact that one of the twins is alive prevents the mare aborting the dead one.

Most readers of this article will no doubt quite well understand the treatment of the mare at foaling time, and of the foal after it is born, when nature should be allowed to have its way as long as all goes well. Weather permitting, plenty of fresh air is the main thing, and as little pampering as possible. Constipation in a young foal has to be guarded against, and a small dose of linseed oil will usually put this right. On the other hand, when the dam comes in use, which is usually about the ninth day after foaling, her milk often becomes acid, and causes the foal to scour; there is no need to worry about this; keeping the dam a bit short of food and water, and giving her about an ounce of bicarbonate of soda twice a day in her mash should be quite sufficient, even if required at all.

To anyone wanting information and practical hints on the management of breeding mares, foals, &c., I should advise a study of a book by Mr Harry Sharp called 'The Practical Stud-Groom,' and also the one I have constantly referred to by Sir Merrick Burrell, called 'Hints on the Breeding and Management of Light Horses.'

A most important fact is constantly overlooked, and that is that the first year of a horse's life is the one that makes or ruins him. How often one sees an unthrifty, pot-bellied weakling that is left to shift for itself after weaning. The probability is that he is full of worms, his feet are never looked to, and consequently his action suffers. The timely use of the rasp, or tip, or half-shoe, on the inside or outside of the foot, as required, will cure what, if unattended to, would be faulty action. As I have said before, one of the worst faults a hunter can have is turned-out toes, which lead to speedy cutting, brushing, &c.

Liberty, space, and undulating ground (not precipices) are the making of young hunter stock, and that is where the Borders have the advantage over many other horse-breeding districts.

To say what a foal out of a half-bred mare is going to turn out to be as a five-year-old is, to my mind, a very unreliable prophecy. In thoroughbred stock it may not be so difficult. I have seen, on going round inspecting, some of the most hopeless cripples as foals, and a few years after have seen the same as good-looking, useful hunters going well to hounds. I have also seen foals going from show to show with red tickets

all over them, which were not worth anything at all when they came to maturity.

Far too many people do not realise the value of hunting to the country. In a pamphlet issued by the British Field Sports Society in 1930-31, on the economical value of hunting, it is estimated that in Scotland, England, and Wales, for the keeping of at least 40,000 hunters five years old and over, 20,000 under five years, and 5000 brood mares, the keeping of hounds, paying poultry claims, wages and upkeep generally, the expenditure is roughly £4,550,000, all of which expenditure is to the benefit of the country, as it is spent locally. Added to this there is the amount of money spent in the district by people who, if it were not for hunting, would go abroad to warmer climates and spend their money there. I think I am right in saying that last season, 1935-36, many more people were hunting than in 1930-31.

## THE FINANCIAL ASPECT OF HUNTER BREEDING.

By Major CHARLES H. SCOTT-PLUMMER of Sunderland Hall.

In the breeding of hunters the question of most importance to the ordinary farmer is—Will it pay? The answer to that depends on many circumstances. Where the farmer is able to break his young horses and make them into hunters, I think there can be no doubt that, given a certain amount of sound judgment and ordinary luck, it should pay him very well. Where he is not able to deal with his young stock, far more judgment and far more luck would be required, but with these and suitable land there is no reason why it should not pay—at least as well as any other stock. Without these qualifications I do not think it would be worth any farmer's while to go in for breeding hunters.

The first and most important point in this pursuit is the choice of a mare. This is of much more importance, in my opinion, than the choice of a stallion. A really good mare may produce good stock, even if mated with an inferior stallion, but one need never hope for good stock from an inferior mare, however good the stallion she is put to. The Arabs, who have studied breeding for centuries, are very strong on this point, and, while they are quite willing to part with a good stallion, they will never part with a good mare. Really good mares are, of course, difficult to find. The best authorities are against breeding from old mares, but young mares of exceptional quality and strength are expensive to buy and, of course, nothing can be known for certain of their

stamina. *Pace* the best authorities, I should be inclined to recommend to anyone starting to breed that he should try for mares that have gone well in the hunting field for, say, ten seasons. Their having done so is a guarantee that there cannot be much wrong with their make, their shape, or their constitution. Such mares can often be got for very little, or even for "a good home," and, having myself bred from several mares, none less than fifteen to start with, I can say that there is nothing in their age to prevent them from producing good healthy stock. Great care should be taken that the mares are perfectly sound—that is so far as hereditary soundness is concerned—that they move straight and are well ribbed. The bigger they are the better, because like produces like, and, other things being equal, a big horse will always sell better than a small one. They should, however, not be too tall or leggy.

The next thing is to choose a suitable stallion. Colonel King has dealt very fully with this side of the subject, so I need not dilate upon it except to say what perhaps hardly needs saying, that if the mare has any defect in her make it is advisable to choose a horse that is particularly strong in that point.

As to the kind of farm suitable for breeding hunters, it is essential to have plenty of pasture. Young horses do not thrive if closely confined in small grazing areas. Some people say that ten acres per horse is not too much, but many people manage to do, and do well, with much less than this. A wide range is, however, of great benefit in keeping young stock in a thriving condition. As to the class of land, I would say that land which produces good strong lambs would be quite suitable for young horses. Young stock should be as much out in the open as possible, but a shed to which they have access is of great benefit in giving them protection from heavy and cold rain and from flies in hot weather.

If the breeder does not break and make his own young stock, he should look for a purchaser when they are two or three years old. At that age it is possible to form a good idea as to how they are going to look as five-year-olds. Dealers as a rule do not fancy this kind of stock, and the purchaser must be looked for among those who buy young stock with a view to training them and selling them as made hunters as four- or five-year-olds. This is, of course, a somewhat risky business, and the purchaser will no doubt look to making a sufficient profit to recompense him for both his trouble and his risk; but, provided the breeder is known to have a good class of stock, he will not want for customers. Good hunters are getting harder to find and their price is rising correspondingly. On the other hand, misfits are practically unsaleable.

## SOME RECENT STOCK-FEEDING TRIALS.

By PRINCIPAL W. G. R. PATERSON, The West of Scotland  
Agricultural College.

THE experiments dealt with in this article, with the exception of one pig-feeding experiment to which brief reference is made, have all been carried out at Auchincruive, the admirable facilities provided there having made possible much more experimental feeding than was formerly the case.

The feeding trials reviewed include cattle-feeding, sheep-feeding, and pig-feeding investigations.

### I. CATTLE FEEDING.

In trials reported in previous issues of the 'Transactions' of the Highland and Agricultural Society, swedes were compared with such foods as potatoes, silage, and dried sugar beet pulp, with a view to ascertaining the relative values of these foodstuffs. It was not until the early part of the winter of 1934-35, however, that an opportunity was found for comparing swedes and marrow stem kale.

Marrow stem kale originated from the crossing of thousand-headed kale and kohlrabi, and though only introduced into general cultivation in the beginning of the present century it is now fairly widely grown, not only in England, but over a considerable part of Scotland. Further, from the way the acreage under marrow stem kale has increased, it is quite apparent that the crop must be serving a very useful purpose.

It cannot be claimed that marrow stem kale has the hardiness of thousand-headed kale, and it certainly suffers rather more in a very severe winter. On the other hand, it is not nearly so liable to finger-and-toe disease as the turnip crop, and it can be relied on to give a fair yield under conditions in which turnips would be likely to fail.

Marrow stem kale is fairly easily grown, it responds particularly well to nitrogenous manuring, completely smothers out weeds, and under good cultivation and favourable soil and climatic conditions is capable of giving a very high yield per acre of valuable succulent food with a higher protein content than swedes.

The latter half of the month of April is a good time to sow marrow stem kale in Scotland, and the crop that results from

seeding at that time is generally at its best from September to December; thereafter the stems tend to get a little harder and the feeding value lower.

(a) *Marrow Stem Kale versus Swedes.*

In the trial designed to ascertain its value relative to swedes, 24 polled blue-grey bullocks were arranged in two uniform groups with 12 animals in each. The general treatment of the two groups was similar in all respects, and the rations fed identical excepting that the bullocks in one lot were given an average of 40 lb. swedes daily over a twelve weeks' feeding period, while in the case of the other lot the swedes were replaced with marrow stem kale supplying an equivalent amount of dry matter.

The dry matter content of the swedes was 9.5 per cent., while that of the marrow stem kale was 11.5 per cent. The leaves of the kale had a slightly higher dry matter content than the stems—namely, 11.88 per cent. as against 11.37 per cent., but the former contributed only 26 per cent., while the latter amounted to 74 per cent. of the total weight of crop. The yield of swedes per acre was 30 tons and of marrow stem kale 37 tons, and in view of the lower yield and lower dry matter content approximately 45 tons of swedes, the produce of  $1\frac{1}{2}$  acres, were required to give an equivalent amount of dry matter to that supplied by one acre of marrow stem kale.

Both the swedes and the kale were cut before being fed, an ordinary root-cutter being used for the purpose, and, fed thus, every part of the kale was readily eaten.

The full rations fed, the average live weight of the cattle in each lot, and the average live-weight increases were as follows:—

Group.	Rations fed.	Average Live Weight.		Average Live-Weight Increase.	
		Start.	Finish.	For period.	Per day.
		cwt. qr. lb.	cwt. qr. lb.	cwt. qr. lb.	lb.
I.	Hay . . . 10 lb. Straw . . . 6 " Beet pulp . . 4 " Concentrates, 5-7½ " Swedes, 36, 40, 44 " Water taken, 5.7 galls.	8 1 21	10 0 7	1 2 14	2.16
II.	As for Lot I. excepting that kale replaced swedes. Water taken, 6.3 galls.	8 1 17	10 0 5	1 2 16	2.19

The concentrate mixture consisted of 2 parts crushed oats, 1 part flaked maize, and 1 part decorticated ground-nut cake. The commencing allowance was 5 lb., but this was increased by  $\frac{1}{2}$  lb. each fortnight, the allowance in this way rising to  $7\frac{1}{2}$  lb. for the eleventh and twelfth weeks, and averaging  $6\frac{1}{2}$  lb. over the entire feeding period.

The amount of swedes fed was increased from 36 lb. to 40 lb. at the end of 4 weeks, and to 44 lb. after 8 weeks, the average for the 12-week period being 40 lb.

The sugar beet pulp was included in view of the relatively small amount of swedes fed, previous trials having shown that 1 lb. dried sugar beet pulp could replace from 6 to 7 lb. of swedes. Another reason for its inclusion was the fact that the College, being growers of sugar beet, their quota of dried beet pulp was obtained at a reduced price.

Feeding for beef production is a means of converting much of the ordinary produce of the farm into a marketable commodity, and though the market may often leave much to be desired in the way of price, the feeder can always dispose of fat cattle, but he might find himself unable to get a sale for all his swedes, oats, hay, straw, &c.

The following gives some indication of the returns obtained for the home-grown foods consumed by the cattle during the fattening period and marketed as beef.

The calculation is greatly simplified from the fact that the cattle were not reared on the farm but were bought at the October store cattle sales and put directly into the feeding-boxes. Further, charges for labour in connection with feeding and attendance and for straw for bedding have been omitted, as the value of the resulting farmyard manure is more than sufficient to meet these as well as to cover overhead charges.

#### FINANCIAL ASPECT AND RETURN FOR CROPS CONSUMED.

Inbuying price (average)	£14 10 0		Selling price (average)	£21 11 0
*Transport charges and sale expenses	0 10 0		(inclusive of subsidy)	
<i>Purchased concentrates—</i>				
3 cwt. sugar beet pulp	0 14 3			
2½ cwt. flaked maize and decorticated ground-nut cake	0 16 6			
Balance, being return for home-grown foods consumed	5 0 3			
	£21 11 0			£21 11 0

\* The transport and sale expenses in the above statement may seem to be unduly low, but the cattle being sold direct to Messrs Brechin Bros. on the dead-weight basis, the usual market charges were not incurred, the only expenses apart from the Certifying Officer's fee being for transport from Lockerbie, where the cattle were purchased, to Auchincruive and from Auchincruive to Glasgow.

From an arbitrary allocation of this balance of £5, 0s. 3d. over the home-grown produce consumed by the cattle and disposed of as beef, it will be readily apparent that highly satisfactory prices have resulted. In that connection, the following would seem to be a fairly reasonable allocation :—

Swedes, 30 cwt., consumed per bullock at 25s. per ton					
or Kale, 25 cwt.	"	"	30s.	"	} = £1 17 6
Hay, 7½ cwt.	"	"	£4	"	
Straw, 4½ cwt.	"	"	£2	"	= 1 10 0
Crushed oats, 2½ cwt.	"	"	£10	"	= 0 9 0
					= 1 3 6
					<u>£5 0 0</u>

From the trial briefly reviewed one may safely conclude that on the dry matter basis marrow stem kale, if used early in the winter and in the manner adopted, is quite as valuable as swedes in the production of beef.

#### (b) *Amount of Concentrates for Fattening Cattle.*

There is great variation in the kinds and quantities of concentrates fed to fattening cattle, and from inquiries received from farmers it would appear that the allowance of concentrates given is often considerably in excess of normal theoretical requirements.

In order to ascertain if there was any justification for this very liberal feeding, a feeding trial was carried out in the early part of the winter of 1935-36.

For this and other investigations 56 blue-grey and Galloway bullocks were purchased at Lockerbie early in October. Half of that number was put directly into the cattle-feeding pens, and the remainder grazed in a fairly well-sheltered field of old grass until the first group was disposed of in the beginning of January. Of the 28 bullocks put directly into the house, two very uniform groups with 12 in each were utilised for the trial with different amounts of concentrates, and the remaining 4 bullocks reserved for a preliminary trial with sprouted maize, to which reference will be made later.

The treatment of the two groups was identical in every respect, except that the cattle in one group received 2 lb. additional concentrates during the whole of the trial, which, like the preceding one, lasted for a period of 12 weeks. This additional allowance of concentrates was given as the first part of the mid-day meal.

The concentrate mixture fed consisted of 4 parts crushed oats, 4 parts flaked maize, 2 parts decorticated earth-nut cake, and 1 part linseed cake.



The complete rations fed were as follows :—

GROUP I.			GROUP II.		
Swedes	.	54, 60, 66 lb.	Swedes	} As for Group I.	
Hay	.	10 lb.	Hay		
Straw	.	6 lb.	Straw		
Concentrates	.	6-8½ lb.	Concentrates	.	8-10½ lb.

The swedes were increased from 54 to 60 lb. after four weeks, and to 66 lb. after eight weeks, the average over the twelve weeks being 60 lb. daily. The concentrate allowance was increased by ½ lb. each fortnight. By increasing the swedes and concentrates in this manner, the steadily increasing requirements of the cattle were fully provided for.

The average live weight at start and finish, the live-weight increase and the per cent. carcass weight to unfasted live weight for the cattle comprising each group were as follows :—

Group.	Concentrate Ration.	Live Weight.		Live Weight Increase.		Carcass Weight to Unfasted Live Weight.
		Start.	Finish.	For period.	Per day.	
I.	Concentrates, 6-8½ lb. Water taken, 3-4 galls.	cwt. qr. lb. 8 2 19	cwt. qr. lb. 10 2 12	cwt. qr. lb. 1 3 21	lb. 2-6	% 56-6
II.	Concentrates, 8-10½ lb. Water taken, 4-1 galls.	8 2 20	10 2 9	1 3 17	2-5	56-8

From the live-weight increases shown above it is clear that the more liberal ration of concentrates fed to Group II. produced no response either in the way of live-weight increase or in increasing the per cent. carcass weight. The less liberal ration evidently proved ample, and the extra allowance of 2 lb. a day, equivalent to 1½ cwt. over the twelve weeks' feeding period and costing 10s., gave no return except perhaps in the enriching of the resulting farmyard manure.

From the theoretical aspect the ration fed to Group I. was sufficient to give a live-weight increase of 2-6 lb. daily, while that fed to Group II. was ample for fully 3 lb. live-weight increase daily.

Group I. responded in keeping with the ration, but Group II. failed to do so, the animals evidently not being capable of responding to the extent the ration provided for. This result would seem to suggest that until such time as fattening propensity can be still further developed, or until we can introduce fresh foodstuffs that will induce an even greater response, a ration similar in nutritional value to that fed to Group I. would appear to be ample for cattle of the class and weight of those used in the trial.

The weight of the cattle and the composition of this ration at the start and finish of the feeding period were as follows :—

	Average Live Weight of Cattle.			Composition of Ration.		
				Dry matter	Starch equivalent	Protein equivalent.
Start . . .	cwt	qr	lb	lb.	lb.	lb
	8	2	19	24.3	12.2	1.8
Finish . . .	10	2	12	27.7	14.8	2.2
Average over feeding period . . .	9	2	15½	26.5	13.5	2.0

It will be observed from the previous table that Group II. took almost three-quarters of a gallon more water per day than Group I., the greater amount of dry matter in the ration for that group no doubt being responsible for this.

#### *Financial Aspect.*

The average purchase price of the 56 cattle already referred to was £14, 11s. 9d., but as the 28 put directly into the feeding pens were rather better than the average they were valued at £15, 3s. 6d., and the 28 left outside, at £14 each.

On the conclusion of the experiment the bullocks constituted a very fine lot, and handled particularly well. They were sold to the Kinning Park Co-operative Society on the dead-weight basis, so that the effect (if any) of the more liberal feeding on carcass weight and quality could be noted, but even from that aspect the extra concentrates seemed to have been thrown away, as no differences could be detected. The price obtained was 7½d. per lb. sinking offal, and exclusive of subsidy of 9s. 4d. per cwt. carcass weight.

The average prices realised were as follows :—

Group I.	.	.	£23 15 6
Group II.	.	.	£23 14 3

The following statement shows the return for the home-grown produce consumed by the cattle in Group I. :—

#### RETURN FOR CROPS CONSUMED.

Inbuying price . . .	£15 3 6	Selling price	
Transport and sale expenses .	0 10 2	(inclusive	
Feeding-stuffs purchased, 3½ cwt.	1 2 6	of sub-	
Balance, being return for		sidy) .	£23 15 6
home-grown foods consumed	6 19 4		
	£23 15 6		£23 15 6

The margin of £6, 19s. 4d., when apportioned over the farm produce consumed by the cattle and marketed as beef, leaves very satisfactory returns, the amounts being as follows :—

Swedes (average of 60 lb. daily) = 45 cwt. at 30s. per ton	£3	7	6
Hay 10 „ = 7½ cwt. at £5 per ton	1	17	6
Straw 6 „ = 4½ cwt. at £3 per ton	0	13	6
Oats, ¼ th of mixture fed daily = 2 cwt at £10, 10s. per ton	1	1	0
	£6	19	6

It will be readily apparent from the above that an excellent return was obtained for the crops fed to the cattle comprising Group I. In the case of Group II., which received the additional daily allowance of 2 lb. concentrates, the feeding costs were 10s. higher and the selling price 1s. 3d. less. The total difference in favour of Group I. was accordingly 11s. 3d. per bullock.

#### *Treatment of Second Group of Cattle.*

As regards the cattle grazed outside until the first group were disposed of, these at first got nothing by way of supplement to the pasture, but as the season advanced and the field became barer an allowance of threshed hay was given, also sugar beet leaves during the period these were available.

These cattle were weighed at the beginning and end of this outwintering period, the live-weight increase during the fourteen weeks being 3 lb. per bullock per week, or rather under ½ lb. per bullock per day.

They were put into the boxes in January, and two uniform groups with 12 animals in each were again selected for further information as to the best allowance of concentrates to feed in addition to the usual quantities of roots, hay, and straw.

The trial was on similar lines to the one already dealt with, excepting that mangels were used to replace swedes in the latter part of the trial, and as the cattle were not so heavy as the first lot the allowance of concentrates for the one group was 5 to 7½ lb., and for the other group 6 to 8½ lb.

The experiment is not yet quite complete, but the average daily live-weight increase for the cattle comprising the two groups has, over a twelve week period, been as follows :—

	Concentrate ration	Daily Live-Weight Increase
Group I. . .	(6-8½ lb. concentrates)	2·3 lb.
Group II. . .	(5-7½ lb. concentrates)	2·3 lb.

The more liberal ration gave a greater increase at first, but the smaller allowance ultimately proved equally good and more economical. Both groups have increased in live weight from  $7\frac{3}{4}$  cwt. to  $9\frac{1}{2}$  cwt., which represents exceedingly good progress for cattle kept outside until well into January.

(c) *Sprouted Maize and the Stimulus from its Inclusion.*

In recent years a new method of producing succulent food for stock has aroused a good deal of interest, maize, barley, oats, &c., being germinated in shallow trays, and the growth forced rapidly on by keeping the sprouting house with its tiers of trays at the optimum growth temperature for the particular grain used. A sufficiency of water is provided,



Fig. 13.—*Sprouted Maize.*

Illustration, by courtesy of 'The North British Agriculturist and Farming News,' showing in trays in front sprouted maize at different stages of growth—A. four days; B. six days; C. eight days; and behind, sprouted maize on the tenth day, and at the stage at which it is fed to the cattle. The sprouted maize has been transferred to the baskets, and is ready for feeding to the cattle.

to which a special nutrient solution is added. Under these conditions the grain sprouts very rapidly, grows to a height of 6-10 inches in from 8 to 10 days, and is then fed to the stock.

With the co-operation of Sprout, Ltd., it was found possible to carry out a preliminary trial with sprouted maize for beef production, and as the results were so promising, a brief reference to the trial has been included in this paper.

Four bullocks from the 28 put directly into the feeding-boxes in October were reserved for the trial. Their treatment was identical in every way with that of Group I. in the experiment already dealt with, excepting that one-third of the daily allowance of swedes was replaced with sprouted maize, supplying the same amount of dry matter. The sprouted maize was found to be very similar to grass in dry matter content,

and just a little over 9 lb. was required to replace 20 lb. of swedes. This foodstuff would appear to have had a pronounced stimulating effect on growth and fattening.

The rate of increase in live weight was at first phenomenal, being fully 4 lb. a day for the first four week period, and averaging 3.1 lb. daily over the entire feeding period. The comparative figures were as follows :—

Group	Ration.	Average Live Weight		Average Live-Weight Increase	
		start	Finish.	For period	Per day
I.	Swedes, 60 lb.	cwt. qr. lb. 8 2 19	cwt. qr. lb. 10 2 12	cwt. qr. lb. 1 3 21	lb 2.6
II.	Swedes, 40 lb.				
	Sprouted maize supplying dry matter equivalent to that in 20 lb swedes	8 2 14	10 3 24½	2 1 10½	3.1

Every part of the sprouted maize (leaf, stem, seed, and roots) was fed to the cattle, and appeared to be much relished. Apart from their greater live-weight increase, there was a distinct difference in the bloom of the cattle on 'Sprout'; their coats were fine and silky, and there was no tendency for any of the hair to come off. Further, when the cattle were slaughtered the appearance of the resulting beef was particularly pleasing and the quality exceptionally fine.

A second experiment with 'Sprout' now nearing completion, and on the same lines as the first, would appear to be confirming the results already obtained, the average daily live-weight increase for twelve weeks being 3 lb., as against 2.3 lb. for the control group.

In view of the very high live-weight increases obtained in these preliminary trials, it would appear as if sprouted maize might be the means of providing in winter a stimulus very similar to, but even more pronounced than, that from young grass in early summer.

With regard to cost of production of 'Sprout,' the experiments have so far been on too small a scale for conclusive information thereon to be obtained, but when the greater live-weight increase resulting from 'Sprout' was taken into account, the material was worth at least £4, 15s. per ton on that basis alone, irrespective of the big saving in maintenance costs from the more rapid growth and fattening accruing from its inclusion in the ration. The cattle getting

an allowance of 'Sprout' equivalent to 20 lb. swedes on the dry matter basis gained in live weight as much in ten weeks as the control group did in twelve weeks. This speeding up of output, with its consequent saving in maintenance costs, is a big factor in economic beef production, and that is one of the aspects in which 'Sprout' is likely to prove particularly valuable.

(d) *Dried Grass Meal as a Concentrate.*

Another foodstuff of special interest at the present time is dried grass. The artificial drying of grass is now beyond the experimental stage; grass-cutting and drying equipment has already been installed on several of the larger farms, and very soon we may expect to see on the market an outfit suitable for the small farm, and at an appropriate price.

Dried grass may serve as fodder or as a concentrate; it was in the latter capacity that it was used in a preliminary trial to ascertain its value for beef production. The composition of the dried grass meal was as follows:—

		Oil . . . . .	3.06%
		Crude Protein . . . . .	20.21%
		Including true Protein . . . . .	16.72%
Dry Matter . . . . .	91.75%	Fibre . . . . .	17.99%
Water . . . . .	8.25%	Ash . . . . .	7.38%
		Carbohydrates . . . . .	43.11%

In the trial the grass meal was used to replace one-half of the concentrates fed to the control group. The mixture consisted of:—

- 2 parts Crushed Oats.
- 1 part Flaked Maize.
- 1 part Decorticated Cotton Cake.

The quantity fed to the control group commenced at 5 lb., and was gradually increased to 7½ lb. To ascertain the relative value of dried grass meal the concentrates for the other group were reduced by one-half, and this replaced with dried grass meal. The rations otherwise were identical.

The grass meal was readily eaten, apparently being relished by the cattle. It seemed as in the case of 'Sprout' to influence bloom and improve the coat, though not to quite the same extent.

In the trial only four cattle were fed on grass meal as against twelve on the control ration. Their average daily gain was 2.36 lb. as against 2.16 lb. for the control group.

When dried grass meal is obtainable at a price in keeping with that of other concentrates, it should constitute a very valuable food, and materially lessen the stock-feeder's dependence on imported feeding-stuffs.

## II. SHEEP FEEDING.

Fairly large-scale experiments in sheep feeding have been carried out at Auchincruive during the last two winters, the main objects being—

- (a) to compare different rations supplying varying amounts of protein, but otherwise similar in nutritional value.
- (b) to determine to what extent sugar beet leaves would replace swedes in mutton production; and
- (c) to ascertain the relative values of swedes and marrow stem kale when consumed growing, and also when cut and fed in troughs.

(a) *Rations Supplying Different Amounts of Protein.*

For this trial 120 hoggets (Border Leicester Blackface crosses) were utilised.

They were arranged in three separate groups, with 40 in each, the groups being made as uniform as possible in every respect. They were enclosed in areas of approximately  $1\frac{1}{2}$  acres. The experiment was continued for a period of twelve weeks, by which time the majority of the hoggets were well finished. The rations fed were as follows:—

Swedes	.	.	9, 10, 11 lb. daily.
Hay	.	.	$\frac{1}{4}$ lb. daily.
Concentrates	.	.	$\frac{3}{4}$ , 1, $1\frac{1}{4}$ lb. daily.

The swedes were increased from 9-10 lb. daily after four weeks, and to 11 lb. after eight weeks, the average over the twelve weeks' period being 10 lb. per day. The concentrates were likewise increased from  $\frac{3}{4}$  lb. to 1 lb. after four weeks, and to  $1\frac{1}{4}$  lb. after eight weeks, the average over the twelve weeks' feeding period being 1 lb. daily.

The mixture of concentrates fed to the three groups was as follows:—

Concentrate Mixture	GROUP		
	I Parts by weight	II Parts by weight	III Parts by weight
Decorticated ground-nut meal . . . .	1	$1\frac{1}{2}$	2
Decorticated Cotton Seed meal . . . .	1	$1\frac{1}{2}$	2
Dried grains (distillery) .	1	1	1
Crushed oats . . . .	$2\frac{1}{2}$	2	$1\frac{1}{2}$
Kibbled maize . . . .	$2\frac{1}{2}$	2	$1\frac{1}{2}$

The variation in the composition of the rations based on the average over the feeding period worked out as follows :—

Composition of Average Ration.	GROUP.		
	I.	II.	III.
	lb.	lb.	lb.
Dry matter . . .	2.10	2.10	2.10
Starch equivalent . .	1.5	1.5	1.5
Protein equivalent . .	.24	.28	.32

The concentrates were fed in two portions, the first soon after daylight and the second in the afternoon. The swedes were cut into fingers and fed in troughs; they were given just after the concentrates had been cleared up.

The hay allowance, 10 lb. daily for each group of 40, was fed in hay racks, and in every case was well cleared up.

The average live weights of the hoggets at the start and finish of the feeding trial and the live-weight increases were as undernoted :—

Group.	Average Live Weight.		Live-Weight Increase.	
	Start.	Finish.	For period.	Per day.
	lb.	lb.	lb.	lb.
I. . . .	67	83.9	16.9	.20
II. . . .	67	84.5	17.5	.21
III. . . .	67	85.3	18.3	.22

There was little difference in the live-weight increases from the different rations, but it is worthy of note that these were in the same order as the protein equivalent content of the rations, thus indicating the advisability of including a reasonable proportion of protein-rich foods in the mixture. In spite of the greater live-weight increase of Group III. the hoggets in Group I. were equally well finished as those in Group III., the effect of the lower protein ration evidently being to fatten rather than promote growth.

### (b) *Sugar Beet Tops for Sheep.*

The increase in the area under sugar beet has provided another succulent food for sheep feeding, and a judicious use of beet tops may add considerably to the return from the growing of sugar beet.



The main drawback in connection with the feeding of beet tops to sheep is the relatively short period over which these are available ; nevertheless, they prove very useful while they are available.

The tops should be allowed to wilt for ten to fourteen days before being fed, and even then the sheep should be gradually accustomed to them. Sheep fed on sugar beet tops should get an allowance of concentrates in addition thereto. If these precautions are taken excellent results are likely to accrue from feeding sugar beet tops to sheep.

The addition to the concentrate ration of 2 ounces chalk per sheep per week is generally recommended for sheep on beet tops on account of the oxalic acid in the beet tops. In the College trials at Auchincruive, however, chalk was not added to the concentrate ration, and if the precautions indicated are taken, its inclusion would appear to be unnecessary.

The main object of the trial was to ascertain what quantity or acreage of swedes the beet tops from 4 acres would replace.

The amount of dry matter in the partially wilted leaves ranged from 14.1 per cent to 17.4 per cent, according to the degree of wilting. The dry matter content was accordingly much higher than that of swedes.

At first the leaves were carted on to the grass and fed in a small enclosed area in which the sheep were confined. The sheep took readily to them, and after a short time were folded on a section of the sugar beet land, the netting being moved back as the beet tops were cleared up.

The area under beet was 4 acres, and the whole of the tops were fed to the sheep, their consumption covering a period of nine weeks. Supplemented with concentrates at the rate of 1½ lb. per day, and hay as required, they provided feeding for a period of nine weeks for 56 Suffolk cross hogs of from 80 to 90 lb. live weight. This is equivalent to 500 sheep weeks, and that in turn is what we expect from an acre of swedes yielding about 25 tons per acre.

The beet tops from four acres were thus equivalent for sheep feeding to one acre of swedes.

#### (c) *Swedes versus Marrow Stem Kale.*

For this feeding trial 128 hoggets (Border Leicester Blackface crosses) were utilised, and after being individually weighed and numbered they were arranged in four uniform groups with 32 hoggets in each, the average live weight of the hoggets in each group being 73 lb.

As the main object of the experiment was to compare swedes and kale, the concentrate ration and the hay allowance for all the groups was the same.

The mixture of concentrates fed consisted of :—

- 1 part Decorticated Ground-Nut Meal.
- 1 part Decorticated Cotton Seed Meal.
- 1 part Dried Grains.
- 2 parts Flaked Maize.
- 2 parts Crushed Oats.

This mixture is lower in protein than the one which gave the best result in trial (a), but the marrow stem kale is higher in protein than swedes.

The starting allowance of concentrates was  $\frac{3}{4}$  lb. per sheep per day, and this was increased by 1 ounce weekly to  $1\frac{1}{4}$  lb. in the ninth week, after which the experiment terminated, as practically all of the hoggets were then ready for the market. The hay allowance was not increased, but was kept at  $\frac{1}{4}$  lb. daily during the entire period.

The four groups were enclosed in areas of approximately one acre in extent at the start of the trial. These areas were adjacent to the swedes and kale, but had been under potatoes earlier in the year, after the lifting of which Italian ryegrass had been sown. The Italian ryegrass served the double purposes of providing some grazing for a few days till the sheep were accustomed to the swedes or kale, and of giving a drier and cleaner bed for the sheep.

The experiment was designed not only to furnish information as to the relative values of swedes and kale, but also to give guidance as to the best method of utilising these crops. The four groups of hoggets were accordingly fed as follows :—

Group.	Concentrates.	Hay.	Swedes or Kale.
I.	$\frac{3}{4}$ - $1\frac{1}{4}$ lb.	$\frac{1}{4}$ lb.	Swedes consumed growing.
II.	do.	do.	Kale consumed growing.
III.	do.	do.	Swedes cut and fed in troughs.
IV.	do.	do.	Kale cut and fed in troughs.

The growing swedes and kale were not restricted in amount, but only a small additional section was given each time the netting required to be removed. This policy tended to lessen the waste that would otherwise have resulted.

The cut swedes and kale were restricted, the amount of swedes being 10 lb. daily for the first three weeks, 11 lb. for the second three week period, and 12 lb. for the final three weeks, the average for the nine weeks' period being 11 lb. daily.

The quantity of marrow stem kale was adjusted so as to supply the same amount of dry matter as the swede ration,

the average quantity required over the feeding period being 9·4 lb.

Despite the unfavourable weather conditions, and the adverse effect of the severe frost on the kale and the growing swedes, all of the groups made reasonable progress, the average live weights for the hoggets in each of the groups and the live-weight increases being as follows :—

Group	Crop and how fed	Average Live Weight		Live-Weight Increase	
		Start	Finish	For period	Per day
I.	Growing swedes . . .	lb 73	lb 90·8	lb 17·8	lb ·28
II.	Growing kale . . .	73	88·4	15·4	·24
III.	Cut swedes . . .	73	89·4	16·4	·26
IV.	Cut kale . . .	73	90·7	17·7	·28

It will be observed that the average live-weight increase for Group II. was rather below that of the other groups. This was undoubtedly entirely due to the fact that a number of sheep in this group suffered rather badly for some time from lameness. There were no lame sheep in any of the other groups.

On the conclusion of the trial the sheep comprising each group were very carefully handled. They were with few exceptions well finished, and no group could be picked out as being definitely superior to the others.

A draft of 22 hoggets from each group, making 88 in all, was sent direct to the Glasgow market and sold in lots of 12 and 10 by two separate auction firms. The prices realised varied considerably, and were not quite in keeping with live weight and condition of the sheep. The price realised for the consignment from the cut swede group was highest on the average, the cut kale group next in order, and the growing swedes and kale groups practically equal.

Through buyers of certain of the groups kindly giving the individual numbers of the hoggets and their carcass weights, it was ascertained that the kale-fed group had killed a little better than the swede group, and that the per cent. carcass weight of the cut kale group was rather higher than that of the growing kale group.

The trial would seem to indicate that kale is just as valuable as swedes for mutton production, and that the best results are obtained when it is cut and fed in troughs. By that method the crop is consumed with the minimum of waste, and a greater number of sheep can be fattened per acre than if the kale is consumed growing.

*Sheep Fattened per Acre.*

The area of ground cleared by the different groups during the fattening period is of importance. In this connection, the two main factors are the crop yield per acre and the method of utilising same. The average weight per acre of the swede crop was  $21\frac{1}{2}$  tons, and of the kale  $17\frac{3}{4}$  tons. In the previous year the swedes averaged 30 tons per acre, and the kale 37 tons, but last year owing to the late severe frost and the drought the kale had to be resown in the end of May.

In spite of the somewhat disappointing yield of swedes and still more so of kale, it was found from the rate at which the ground was cleared by each group of hoggets that the numbers that could be kept per acre for a nine weeks' fattening period were as follows :—

Manner in which crop was utilised.	Number of hoggets that could be kept for nine week period.
Swedes consumed growing.	61
Kale consumed growing.	51
Swedes cut and fed in troughs.	66
Kale cut and fed in troughs.	63

It will be observed from the foregoing that more sheep can be kept per acre if the crop is cut and fed in troughs than if eaten off. The difference in the case of the swedes is not so great, but it has to be remembered that where the swedes are consumed growing the leaves add materially to the yield per acre. Where the swedes were cut and fed in troughs the swede leaves were not given to the sheep, and this probably accounts to some extent at least for the rather greater live-weight increase made by the sheep on growing swedes.

From the trial one may reasonably conclude that in mutton production kale is a valuable substitute for swedes. The trial also indicates that, if we disregard the extra labour involved, the best return is got from kale where it is cut and fed in troughs, as it is then consumed without waste and more sheep can be fattened per acre.

## III. PIG FEEDING.

The pig, unlike the bullock or sheep, is not a ruminant, and consequently its food requirements are vastly different from those of the classes of stock we have been considering.

Where the pigs are intended for pork or for bacon, and maximum progress is desired, the food must be fairly con-

centrated, easily digested, and of low fibre content. In view thereof dairy by-products, where available, constitute a particularly valuable food for the feeding of pigs.

In one of the earlier pig-feeding experiments carried out by the College at Holms Farm, Kilmarnock, a ration consisting of barley meal and separated milk proved superior to a great many other rations tested, the superiority being evinced both in the greater live-weight increase obtained and in the excellent quality of the bacon that resulted from feeding this ration. In the trial a group of 8 pigs, during a feeding period of 77 days, actually gave an average daily live-weight increase of 1.71 lb. or 12 lb. per week. After the lapse of a quarter of a century, and with all the aid science can give, we have not discovered a ration that will give greater live-weight increase than that obtained at that time.

During the experiment a group of 8 pigs increased in live weight from an average of 85 lb. to 217 lb., an increase of 132 lb. in a period of eleven weeks.

The average amount of barley meal and separated milk consumed was 174 lb. barley meal and 410 gallons of separated milk per pig, which works out at 1.32 lb. barley meal and 3.1 gallon separated milk per lb. live-weight increase. The proportion of milk to meal is high, and under the grading system that now prevails would probably have had an adverse effect.

If we have not found a ration that will grow and fatten pigs more rapidly than barley meal and separated milk, we have nevertheless made progress in many other respects, and particularly in connection with systematic rationing and in lowering the food required per lb. live-weight increase, and likewise the cost at which it is obtained.

*(a) Another Barley Meal Separated Milk Feeding Trial.*

During the summer of 1935 a group of 8 pigs, the progeny of one sow, were fed on a ration of barley meal and separated milk, the proportion of meal to milk being considerably greater than that in the trial just referred to. The trial lasted for a period of sixteen weeks. The meal and milk were fed in the proportion of 1 lb. barley meal to 1 gallon of separated milk.

The starting allowance was on the basis of  $\frac{1}{2}$  lb. barley meal and  $\frac{1}{2}$  gallon separated milk for 28 lb. live weight, and was adjusted in keeping with the actual live weight of the pigs.

As the pen weight was 280 lb., the 8 pigs averaging 35 lb., the meal allowance for the group was 5 lb. daily, and the milk allowance 5 gallons daily.

The ration was increased by  $\frac{1}{2}$  lb. of meal and  $\frac{1}{2}$  gallon of milk per pig per week during the entire feeding period, the amount of meal per pig in the sixteenth week being  $2\frac{1}{2}$  lb. and of milk  $2\frac{1}{2}$  gallons.

The average live weight of the pigs at the start and finish of the trial, the live-weight increase, and the barley meal and separated milk consumed were as follows :—

Average Live Weight.		Average Live-Weight Increase.	Meal Consumed.		Milk Consumed.	
Start.	Finish.		For period.	Per lb. Live-Weight Increase.	For period.	Per lb. Live-Weight Increase.
lb. 35	lb. 168	lb. 133	lb. 175	lb. 1.3	gall. 175	gall. 1.3

It will be observed that in this trial the meal and milk required to produce 1 lb. live-weight increase was 1.3 lb. of meal and 1.3 gallons of milk, a result which must be considered very satisfactory. In the previous trial already referred to the amounts required to give 1 lb. live-weight increase were 1.32 lb. barley meal and 3.1 gallons of milk. The lowering of the amount of food required per lb. live-weight increase is in great measure due to the rationing system adopted.

(b) *Two Rations that can be relied on.*

Dairy by-products, though very valuable in pig-feeding, are by no means indispensable, and where not available the following which has, with little modification, been the standard ration at the College for many years can be relied on to give excellent results :—

Ingredients in Meal Mixture.	First Period. For six weeks after weaning. 8th to 14th weeks.	Second Period. For six weeks. 14th to 20th weeks.	Final Period. Till pigs reach bacon weight.
	Parts by weight.	Parts by weight.	Parts by weight.
Fine Thirds . . .	4	3	2
Barley Meal . . .	3	3	4
Maize Meal . . .	2	3	3
White Fish Meal . .	1	1	1

With pigs that are well nursed and weaned about 8 weeks old, they can on this ration be reared to bacon weight of 210 lb. or thereby when just over 6 months old. It is a ration that has 'stood the test,' and many thousands of pigs have been fed on it.

The fine thirds used in the first period are replaced with common thirds during the second and third periods. The maize meal may, with some slight advantage, be replaced by flaked maize during the first period if the difference in price

is not too great, but after the first period maize meal would appear to be just as effective as flaked maize.

The fish meal is not only rich in protein but is also an excellent mineral supplement, and makes good any deficiencies in a ration of thirds, barley, and maize. If white fish meal is used, and the amount does not exceed 10 per cent in the ration, there is no risk whatever from its use right up to the time of slaughter. Further, it is well to remember that in the final stages of fattening the pig is growing and putting on weight even more rapidly than at any other period, and still requires protein and mineral constituents.

The inclusion of one part dried skim-milk powder in the first period makes for a slight but rather costly speeding up of live-weight increase.

The ration which, as regards live-weight increase and cost thereof, has in our trials come nearest to equality with the foregoing, is one in which the fish meal was replaced by decorticated ground-nut meal and a mineral supplement consisting of 2 per cent steamed bone-flour and  $\frac{1}{2}$  per cent salt.

The ration, exclusive of the mineral supplement, was as follows:—

Ingredients in Meal Mixture.	First Period. For six weeks after weaning. 8th to 14th weeks.	Second Period For six weeks. 14th to 20th weeks.	Final Period. Till pigs reach bacon weight.
	Parts by weight.	Parts by weight	Parts by weight.
Fine Thirds . . . .	4	3	3
Barley Meal . . . .	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$
Maize Meal . . . .	2	3	3
Decorticated Ground- Nut Meal (extracted).	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1

This ration, like the previous one, has been fully tried out and has given excellent results.

Much of the success in pig feeding depends on restricted and systematic rationing, and that method has been in operation for the past ten years in the College Piggery. The basis for rationing now in operation in the case of the two rations set out above is to allow 1 lb. mixed meals for a live weight of 28 lb., and increase by  $\frac{1}{4}$  lb. weekly thereafter. For example, if the young pig at weaning weighs 35 lb. its meal allowance is 1 $\frac{1}{4}$  lb., and this allowance is increased by  $\frac{1}{4}$  lb. weekly till bacon weight is reached, the meal allowance at that stage generally being 5 $\frac{3}{4}$  or 6 lb. The water allowance is from three to four parts per lb. of dry meal.

Apart from this method of rationing giving the most economic live-weight increase, there is good reason for believing

that it gives better grading than where unrestricted rationing is the system of feeding that prevails, and to-day that is a factor of very great importance.

With a good type of pig, tested rations such as those indicated, suitable housing, and efficient management, there should be no difficulty in getting on the average of the feeding period 1 lb. live-weight increase for a meal consumpt of 3 lb. or thereby.

### (c) *Outdoor versus Indoor Rearing of Pigs.*

There are divergent views amongst pig feeders as to the relative merits of indoor and outdoor rearing of young pigs intended for bacon production, and in order to obtain some information on this point the following experiment was undertaken, under which the rate of growth and fattening of a litter of pigs farrowed, reared, and fattened indoors was compared with that of another litter farrowed in a wooden hut, with access to a grass run, and, when weaned at eight weeks of age, fattened indoors. The trial was really designed to ascertain subsequent effect of indoor and outdoor rearing up to weaning stage.

Two pure-bred Large White sows which were litter sisters, and in their previous farrow—their first—had proved excellent mothers and nurses, were selected for the experiment. They were mated to the same boar, and by a fortunate coincidence the time of farrowing differed by less than twenty-four hours, the one sow farrowing on the 24th of May and the other on the 25th. Both sows produced litters of eleven pigs. All of the young pigs were particularly strong and healthy, and all were successfully reared in the one case and ten of them in the other.

The sows and litters were fed in exactly the same way, the meal mixture and the quantity of meal being the same for both, and even the actual times of feeding approximately the same.

The meal mixture was the College standard ration for nursing sows, and consisted of 4 parts fine thirds, 3 parts barley meal, 2 parts maize meal, and 1 part white fish meal. The average allowance over the nursing period was  $7\frac{1}{2}$  lb. daily for sow and litter, but actually varied from 6 lb. per day at the commencement to 9 lb. per day at the time the litter was weaned. The meal mixture was given in three feeds daily and was fed dry, but water was added when the meal was about half consumed.

The outdoor fed sow and young pigs had the benefit of the grass as a supplement to the daily ration, but no deduction was made in the meal allowance, this being kept exactly the same as that of the indoor sow.

Both litters were weaned on the 20th of July, the young



pigs being eight weeks old. The outdoor litter was then brought in and both groups put up for fattening.

In order to have the numbers similar and in keeping with the size of the pen, a small and rather unthrifty pig in the outdoor group was withdrawn, leaving ten in each group. The average weight per pig for the ten in each group at this stage was as follows :—

Indoor litter . . . . .	36.0 lb.
Outdoor litter . . . . .	30.6 lb.
Difference in favour of indoor reared litter .	5.4 lb.

The two groups were fed exactly alike on the standard ration already given on page 75, and treated alike in every respect.

After a feeding period which extended to 19 weeks, by which time the pigs were 27 weeks old and had reached appropriate bacon weights, the average live weight of the pigs comprising each group were :—

Indoor litter . . . . .	211.6 lb.
Outdoor litter . . . . .	205.3 lb.
Difference in favour of indoor reared litter .	6.3 lb.

As the average live weight when the pigs were put up for fattening was 5.4 lb. in favour of the indoor litter, it would seem as if there was no advantage but rather the reverse from outdoor rearing up to the weaning stage. The progress made by the outdoor reared litter up to that time was not so good, and though it was thought that they might overtake the indoor reared litter, they did not do so, and the ground lost during the period of outdoor rearing was never made up.

The significance of this result is all the greater when allowance is made for the fact that the period of the year at which the young pigs were out-of-doors, namely May to July, represented the ideal time for outdoor rearing.

### *Selective Breeding versus Feeding.*

One particularly important factor in any feeding trial is the capacity of the animal to respond to the feeding, and this applies equally to feeding for beef, mutton, bacon, or for milk, making one realise, perhaps just a little reluctantly, that while feeding is very important, breeding on right lines for the production of the type capable of responding, is of still greater importance. If, for example, your car is only geared for a speed of 30 miles per hour, you cannot hope to drive it at 50. If you desire to travel at the higher speed you must select your car accordingly. In the same way, if we are going to get

the desired response in feeding different classes of stock, we must have stock capable of responding.

In this connection, the average individual increases from 220 cattle utilised in recent feeding trials are instructive.

The average weekly increase for the 220 cattle was 15·7 lb. When they are arranged in two groups, one including the cattle with a live-weight increase of over 14 lb. weekly, and the other the cattle with a weekly increase not over 14 lb. weekly, the respective numbers in the groups and their average weekly increases are as follows :—

A. Number with weekly increase over 14 lb. . . . .	119.
Average weekly increase for group . . . . .	18·3 lb.
Ration, in terms of total dry matter, consumed per lb. live-weight increase . . . . .	9·5 lb.
B. Number with weekly increase not exceeding 14 lb. . . . .	101.
Average weekly increase for group . . . . .	12·8 lb.
Ration, in terms of total dry matter, consumed per lb. live-weight increase . . . . .	13·6 lb.

It will be observed that while the average live-weight increases for the 220 cattle was on the whole very satisfactory, being 15·7 per animal per week over a 12 weeks' feeding period, those in Group A. actually averaged 18·3 lb. per week, and consequently put on as much weight in just over eight weeks as those in Group B. did in twelve weeks, thereby showing that they had made much more efficient use of the food fed to them.

The capacity of the animal to respond to the feeding is undoubtedly an all-important factor in economic production.

No matter how carefully the rations are devised, or how efficient the management, these things in themselves are not enough. We must have, in addition, selective breeding for the production of stock with the capacity to respond to the feeding, for, without that, we cannot get the maximum return.

## CONCLUSIONS.

The following would appear to be reasonable conclusions from the results of the feeding trials reviewed in this paper :—

### BEEF.

That marrow stem kale on the dry matter basis is just as valuable as swedes in beef production.

That in view of the very high yield per acre that can,

under favourable conditions, be obtained from marrow stem kale and its high dry matter content, the food value of kale per acre will often be much greater than that of swedes.

That under the conditions that prevailed, a commencing allowance of 5 lb. or 6 lb. concentrates, with a fortnightly increase of  $\frac{1}{2}$  lb. daily, would appear to give quite as good results as a more generous starting allowance with a corresponding increase.

That dried grass meal will effectively replace at least half of the concentrate ration.

That sprouted maize would seem to have a marked stimulating effect, and to contribute to greater daily live-weight increase, its inclusion to the extent of 9 lb. daily, the equivalent of 20 lb. swedes on the dry matter basis, being likely to shorten the normal feeding period by at least two weeks.

### MUTTON.

That in feeding for mutton production with rations of similar value as assessed on the dry matter and starch equivalent basis, but supplying varying amounts of protein, the difference, though slight, was in favour of the higher protein allowance.

That sugar-beet leaves from an average crop are, per acre, approximately equivalent for sheep feeding to six tons of swedes.

That marrow stem kale would seem to be just as valuable as swedes in mutton production, and that if we disregard the extra labour involved, the best result is got from cutting it and feeding it in troughs. Further, more sheep can be fattened per acre than if the kale is consumed growing.

### BACON.

That barley meal and separated milk, in the proportion of 1 lb. barley meal to one gallon separated milk, constitutes an excellent ration for pigs being fed for bacon.

That in pig feeding, restricted and systematic rationing is a factor of great importance in economic production.

That, in the west of Scotland, outdoor rearing during the nursing period, even under favourable conditions, proves of no advantage in the case of pigs being fed for bacon purposes.

That though feeding is a factor of great importance, selective breeding for the production of stock capable of growing and

fattening rapidly is at least of equal, if not of even greater importance.

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*Note of Acknowledgment.*—This opportunity is taken of expressing special thanks to Mr Cochrane for the general supervision of the feeding trials and to the staff for carrying out so carefully the rationing and all other work involved.

Thanks are also due to Dr M'Arthur of the Chemical Department and his staff for carrying out the analyses of many of the foodstuffs used in the feeding trials.

## INSECT AND OTHER PESTS OF 1935.

By A. E. CAMERON, M.A., D.Sc., F.R.S.E.,  
Consulting Entomologist to the Society.

IN 1935 the major proportion of the inquiries of correspondents concerning injurious insects had reference to those attacking Cruciferous crops. I shall, therefore, give a brief account of certain of the more common, including the Swede Midge (*Contarinia nasturtii*), the Cabbage Stem Weevil (*Ceuthorrhynchus quadridens*), the Cabbage Root Maggot (*Phorbia brassicae*), the Diamond-Back Moth (*Plutella maculipennis*), and the Cabbage Aphides (*Brevicoryne brassicae* and *Myzus persicae*). In the Lothians, where the depredations of these pests were particularly severe, the swede crop was heavily infested by the Swede Midge and the Cabbage Stem Weevil, whilst Brassicas of all kinds were attacked by the two aphides and the Diamond-Back Moth. An example of how departure from the normal mode of cultivation might render a crop susceptible to insect attack was observed on a farm in East Lothian. Here a crop of rape was grown in close rows to provide fodder for sheep, and the plants were very thick. Their subsequent conspicuous retardation of growth was a direct result of the exertion of strenuous mutual competition, which was not alleviated by the persistent abnormally dry conditions. In these untoward circumstances, the Diamond-Back Moth and aphides flourished exceedingly and aided in completing the destruction of the crop. By way of comparison, an adjoining crop of marrow stem kale, singled to about ten inches, had successfully resisted attack and went almost unscathed.

### THE SWEDE MIDGE (*Contarinia nasturtii*).

In 1912, Taylor<sup>1</sup> wrote an interesting and valuable account of the habits and life-history of the Swede Midge in Yorkshire. This was followed in 1915 by a paper published by Dry,<sup>2</sup> whose extensive observations aimed to discover the causes which determine variations of its seasonal abundance.

<sup>1</sup> Taylor, T. H., 1912. "Cabbage-top in Swedes." Univ. Leeds and Yorks Council Agric. Educ., No. 82, pp. 1-21.

<sup>2</sup> Dry, F. W., 1915. "An attempt to measure the local and seasonal abundance of the Swede Midge in parts of Yorkshire over the years 1912 to 1914." Ann. App. Biol., Vol. II., pp. 81-108.

Although, at various times, it has been reported as a pest of Cruciferous crops in England and Wales, and abroad in Germany, Denmark, and Norway, it has apparently escaped notice in Scotland. It is, therefore, timely, in view of its injurious activities during the past two summers, that attention should be focussed upon its occurrence and economic importance in this country.

*Life-history*.—The flies, which are first found on the wing in June, are about one-sixteenth of an inch in length, delicate and pale yellowish-brown. The *male* (Fig. 14 A) has antennæ

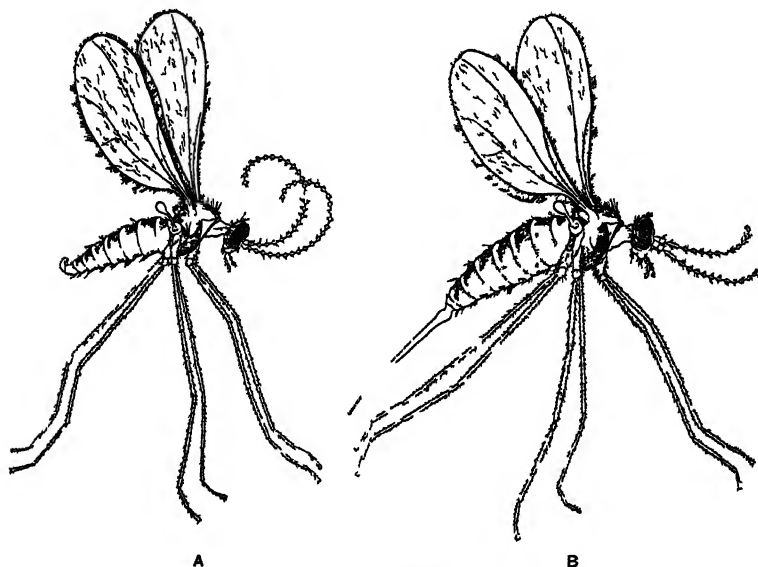


Fig. 14.—*Contarinia nasturtii*. *Suede Midge*. A, *Male*, B, *Female*.  $\times 16$ .

After Taylor

that are longer and more graceful than those of the *female* (Fig. 14 B), which is further distinguished by its slender, needle-like ovipositor. When extended, the latter almost equals the length of the hind region of the body. When not in use it is completely withdrawn into the body and hidden from view. Mating of the sexes occurs immediately the flies emerge, and the business of egg-laying follows almost at once. The duration of life of the individual is short, and that of the male terminates with pairing, of the female with egg-laying.

The *eggs* (Fig. 15), which are white, minute, and scarcely visible to the naked eye, are deposited in clusters or strings on the leaves, sometimes on the upper surface of the blade,

but more frequently on the upper surface of the stalk, and preference is shown for the younger leaves in the heart of the crown. Hatching occurs in about four days.

The minute legless *maggots* (Fig. 16) are about one-tenth of an inch long after about three weeks, when they are full grown. They are pale yellow and do not wander far from the spot where they hatched. In feeding, they scarify the surface of the leaf and imbibe the released juices, in which they are bathed. In response to the irritation caused by the feeding

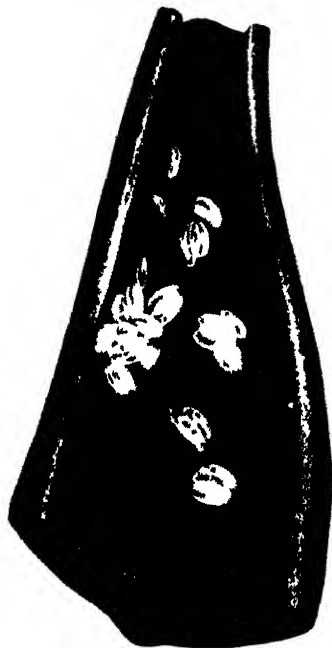


Fig. 15.—Eggs of *Contarinia nasturtii*,  
*Suede Midge*, on upper surface of  
stalk of young swede leaf.  $\times 20$ .

After Taylor



Fig. 16.—Larva of *Contarinia nasturtii*,  
*Suede Midge*, on upper surface of  
young swede leaf.  $\times 3$ .

After Taylor.

maggots, the affected parts become distorted, the degree of distortion depending upon the age of the plant and the number of maggots present. Like other midge-maggots, those of the *Suede Midge* have a peculiar habit of jumping when disturbed. Finally, they abandon the host-plant for the soil and enclose themselves in silken cocoons beneath the surface, where they pupate. In the summer, the *pupa* (Fig. 17) remains quiescent for two or three weeks, when it forces its way out of the cocoon to the surface of the soil, above

which it projects slightly. The pupal skin then splits and the fly emerges. Altogether there may be three or four generations per year, depending on climatic conditions, and each requires six or seven weeks to complete its development, except the last, the duration of which is long-drawn-out by virtue of its spending the winter as a pupa in the soil. It is from the overwintering pupæ that the first brood of flies emerge in June.

In addition to the swede, the midge has been recorded from the turnip, rape, cabbage, charlock, radish, wild radish, marsh-watercress, and creeping watercress. Turnips are only slightly attacked, and it has been suggested by Dry that their comparative immunity may be attributable to their being sown later than swedes.

*Damage to the Host.*—Symptoms of the activities of the Swede Midge first become apparent in June. The maggots hatched from eggs laid in the crown of the young plant by

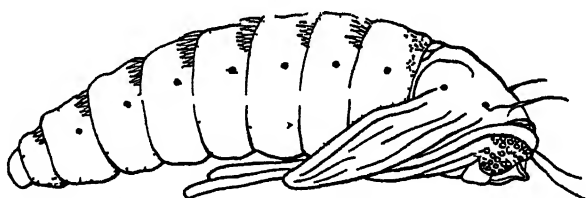


Fig 17 —Pupa of *Contarinia nasturtii*, Swede Midge.  $\times 45$ .

After Taylor

the flies of the hibernating generation, feed on the growing central shoot and on the inner side of the bases of the stalks of the first few rough leaves. As a result, the latter become swollen, and instead of spreading outward remain contiguous and bend sharply inward over the terminal bud, which may be completely destroyed (Fig. 18). In the latter event, adventitious buds encircling the central shoot are stimulated to develop in an effort to make good the loss. Thus several secondary shoots are differentiated, replacing the main one, and they lend to the plant a cabbage-like appearance, which is popularly called 'cabbage-top' or 'many-necked' (Fig. 19). The condition may be further aggravated by the infestation and destruction of the growing tips of the secondary shoots.

Plants thus affected suffer a serious retardation of growth, which is finally expressed in a reduction of the yield of the crop. From a series of weighings of swedes made during the winter following an attack, Taylor found that the weight of 'many-necked' specimens averaged only half as much as



normal ones. Diminution of yield of intested swedes was recently verified in Wales by Davies,<sup>1</sup> who employed the same method as Taylor. In one district, Davies reckoned that a forty-per-cent infestation of Swede Midge reduced the yield by five tons per acre. In a test of seven varieties of swede, Davies found that all were equally susceptible to attack by the midge, but that 'Superlative' suffered the greatest loss of weight, 'Danish Bangholm' and 'Wilhelms-



Fig. 18.—Young swede plant injured by the larvæ of *Contarinia nasturtii*, Swede Midge.

The base of the leaf-stalks are swollen, constricting the growing point. (After Taylor)

berger' the least. The explanation of this difference emerges from the lesser powers of recovery from attack displayed by 'Superlative' in comparison with the other tested varieties, particularly 'Danish Bangholm' and 'Wilhelmsberger.' Besides loss of yield, there is another less apparent, which consists in a substantial deterioration of the texture of the root, due to the development of an excess of fibrous tissue associated with the growth of accessory shoots.

<sup>1</sup> Davies, W. M., 1931. "The 'many-necked' condition of swedes, in relation to varietal and manurial trials." *Welsh Jour. Agric.*, Vol. VII, pp. 319-332.

Whilst the Swede Midge is a very important causative agent of cabbage-top, it must be emphasised that it is not the only one. Destruction of the central shoot from whatever cause, mechanical or biological, will have the same effect.

The injury caused to the swedes by the broods of maggots



Fig. 19.—Swede showing the condition known as "many-necked" or "cabbage-topped," with several accessory shoots.

Damage of this kind may be caused by the Swede Midge. *After Taylor.*

subsequent to the first is of little significance in itself. Their feeding is confined to the upper surface of the coarse leaves, which become irregularly puckered or crumpled in consequence. In the deep narrow furrows between the puckers the maggots, securely protected, continue their depredations. Although the crumpling reduces the photosynthetic surface

of the leaf, the ratio of crumpled to uncrumpled surface in a large leaf is usually so small as not to interfere seriously with the growth of the well-established plant.

*Soft Rot.*—During the past two years the damage done to the swede crop by the midge in the south-east of Scotland has been overshadowed by that due to Soft Rot, for which the organism *Bacillus carotovorus* is responsible. Infection usually begins in the crown of the plant and spreads throughout the root, which is ultimately reduced to a condition of liquescent putrefaction. The opinion is prevalent that the bacterial infection is a sequel to the injury caused by the maggots of the Swede Midge, particularly those of the first generation, which concentrate on the crown of the young plant. In one district it was the general belief that Soft Rot was unknown in swedes until two or three years ago, when the midge first made its appearance. At the same time, it must be remembered that any agent, biological or mechanical, which causes lesions of the plant may render it susceptible to infection. Thus it was observed that Soft Rot was not confined to swedes affected by cabbage-top. On the contrary, in a field near Haddington where the swedes had been so universally attacked by the Swede Midge that almost every plant was cabbage-topped, not a single one was stricken by Soft Rot. This particular field was submitted to intermittent observation during the summer, autumn, and winter, until the crop was lifted, so that there was ample opportunity to observe infection if it had occurred. Its absence may have been merely due to the fact that the field was situated at some distance from the area where Soft Rot was prevalent, and the plants had, therefore, not been submitted to the risk of natural infection.

Relative to the foregoing observation, it is interesting to record that in Wales, Davies (*loc. cit.*) found only twelve swedes infected with Soft Rot among a random lot of 174 that had suffered from midge attack. In seven of the twelve the initial focus of infection was situated in the roots and not in the crown, and in three others it was traceable to a cleft in the side of the root. In a further random lot of 300 swedes, of which 140 were cabbage-topped, Soft Rot was present in eleven, but of these seven were not affected with cabbage-top. Whilst negative evidence does not warrant the deduction of definite conclusions, Davies' figures would appear to indicate a lack of correlation between incidence of Swede Midge and that of Soft Rot, provided that the prevailing climatic conditions were favourable to the spread of the bacterial infection.

*Control.*—The problem of the Swede Midge is not one which lends itself to solution by the application of direct

measures of control. The maggots are so securely entrenched within the folds of the crumpled leaves that to encompass their destruction by the application of an insecticidal spray is quite impracticable.

Resort must therefore be had to preventive measures.

1. Of these, that of the *trap-crop* recommended by Taylor would appear to promise good results. By this method advantage is taken of the comparative sluggishness of the flies emerging from the overwintering pupæ in the soil. Their range of flight is limited, and they therefore avail themselves of host-plants that are in close proximity to the place of their birth. Such plants they would find in a strip of swedes planted early around the headlands of a field that had been infested the previous year. After the flies have visited the strip and completed their egg-laying, the swedes should be lifted about the end of June and destroyed along with the contained maggots.

2. As an alternative to trap-crops, *manurial dressings* may be applied to stimulate the growth of the plants during the period of susceptibility to attack and increase their resistance. In Wales, Davies found that the application of nitrate of soda in the drills, at the rate of 1 cwt. per acre, caused an appreciable reduction in the incidence of 'cabbage-top.' It is recommended that the nitrate of soda should be applied at a date sufficiently early to be of use to the plants when the attack begins, and it is therefore best introduced into the drills before, or at the time of sowing.

#### CABBAGE STEM WEEVIL (*Ceuthorrhynchus quadridens*).

Like the Swede Midge, the Cabbage Stem Weevil has been practically overlooked in Scotland. In recent years it has been recorded as a pest of Brassicas in Denmark, Norway, Finland, Russia, and Germany, and is considered by some to be as injurious as the Cabbage Root Maggot (*Phorbia brassicae*) with which it is frequently associated and for which it is not infrequently mistaken.

*Life-history*.—The *adult beetle* (Fig. 20) is about one-eighth of an inch in length and, discounting the slender curved beak, is slightly more than twice as long as its greatest breadth. It is oval in shape, with the upper surface flat. The ground colour is black, but is obscured by an almost uniform investment of greyish-brown or whitish scales. The feet and the antennæ are reddish. Just behind the head the middle region (thorax) of the body is constricted to form a collar and is traversed by a median longitudinal furrow, on either side of which there is a prominent swelling. At the hinder end of

the wing-covers there is a transverse series of small black bosses, which lend a roughened appearance to the surface.

In the south-east of Scotland the beetles are first observed in April or May feeding on the seed-leaves of swedes, from which they readily drop to the ground when disturbed. Their minute size and similarity of colour to that of the soil, combined with their habit of feigning death, renders them practically indiscernible among the soil particles.

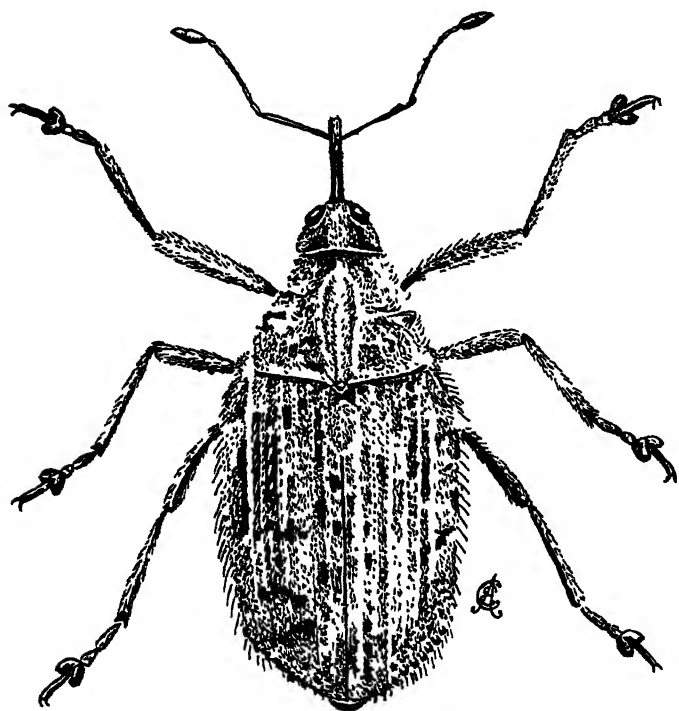


Fig. 20 — *Ceuthorrhynchus quadridens*. *The Cabbage Stem Weevil*.  $\times 20$ .

From nature.

The eggs are laid on the rough leaves of the swede during May and June. The female, after making a puncture with its beak on the under-side of a leaf-stem or midrib, deposits therein anything from one to seven eggs, repeating the operation until a maximum of about 140 are laid. After a lapse of five to six days, the eggs hatch, and the soft-bodied, slightly curved, white, legless maggots burrow into the tissues, making a gallery (Fig. 21), which becomes stained brown by their included excreta. Gradually they work their way downward,

and after a period of about three to five weeks, when they are full grown (Fig. 22) and about three-sixteenths of an inch long, they abandon the host-plant and drop to the ground. Here they pass beneath the surface to a depth of about two inches, where they are found at the end of June and beginning of July.

Some of the maggots in their descent of the leaf-stems may pass into the crown of the root, where I have frequently found as many as a dozen actively burrowing in the pulp. In the galleries of individual infested leaf-stems there may occur anything from six to ten maggots. They are frequently accompanied by the maggots of the Cabbage Root Fly.

In the soil the maggots fashion, for their accommodation, earthen cells where they change to the resting *pupa*, which lasts for about three weeks. At the end of July a few adult beetles of the next generation may emerge from the *pupæ* to the surface of the soil and feed for a short time on the leaves of their host-plants. Later they re-enter the soil to hibernate without having laid eggs. The majority of the beetles, however, remain dormant in their pupal cells until the spring, when they are stirred to activity by increasing temperatures and renew the cycle after pairing and feeding. It will thus be observed that there is but one generation per year, during which three months are occupied in the development of the adult through larva and pupa from the egg, whilst the hibernating and active phases of the adult are spread over the remaining nine months.

*Damage.*—The injuries caused by

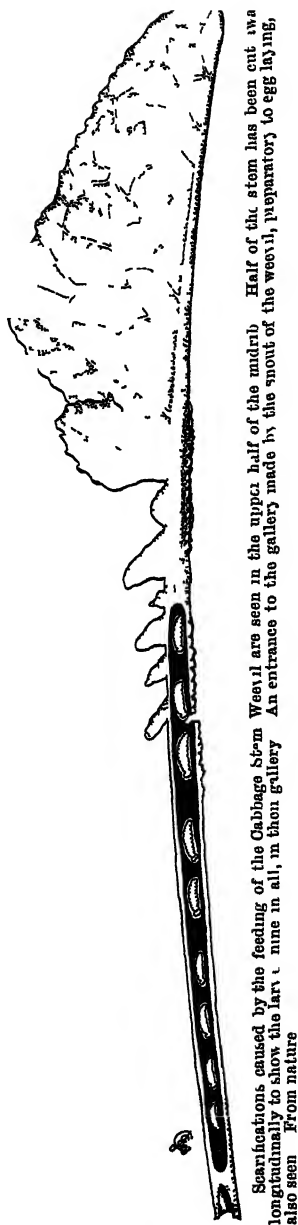


Fig. 21.—Young leaf of swede with blade closed, viewed from the side.

Scarcifications caused by the feeding of the Cabbage Stem Weevil are seen in the upper half of the midrib. Half of the stem has been cut away longitudinally to show the larva, none in all, in then gallery. An entrance to the gallery made by the snout of the weevil, preparatory to egg laying, also seen. From nature

the feeding of the adults on the foliage are less severe than those due to the mining of the larvæ. Nevertheless, the adults emerging from hibernation in the spring may not only seriously retard the growth of the seedlings by attacking the seed-leaves, but actually destroy them in times of severe infestation. The later feeding of the beetles on the rough leaves is of little importance, and this likewise applies to the late summer feeding of the few adults which prematurely emerge from hibernation and feed on the foliage for a brief period.

It is much otherwise with the maggots, which by their excavation of the stems cause the leaves to wilt and perish. Even before their total destruction is accomplished, the stems may be so weakened as to be readily broken by the wind. The presence of the larvæ in a stem or midrib is plainly indicated by the scarification of the superficial tissues consequent on the holes drilled by the snout of the beetle for the reception of the eggs. The tissue surrounding the punctures cracks, and the lesions expand with the growth of

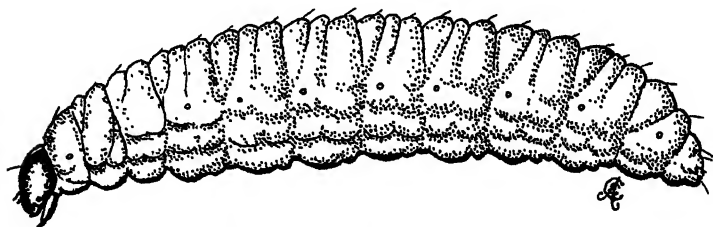


Fig. 22.—*Larva of Ceuthorrhynchus quadridens. Cabbage Stem Weevil.* × 20.

From nature.

the affected part, finally becoming brown, corky, and swollen, as shown in Fig. 21.

It is not improbable that the lesions made by the Cabbage Stem Weevil may render the plant susceptible to secondary attack by Soft Rot, whereby its potentialities as a pest are much increased, just as are those of the Swede Midge.

*Control.*—It is evident from the foregoing that the control of the Stem Weevil presents considerable difficulties. The larvæ, securely protected in their burrows, cannot be destroyed by the application of poisonous sprays.

1. Ploughing in the spring would have no detrimental effect on the resistant hibernating adult beetles. Pupation, too, occurs so early in the year (July and August), whilst the crop is still in the process of growth, that cultural measures, which would otherwise serve to destroy the delicate pupæ in the soil, could not well be undertaken.

2. Resort must therefore be had to spraying the young

plants in the spring with an arsenical spray to kill the beetles when they emerge from hibernation and commence feeding.

3. Alternatively, deterrent dusts might be advantageously applied to the seedlings, and Derris dust, 30 lb. per acre, or Naphthalene-Silica dust, 55 lb. per acre, would probably be as effective against the Cabbage Stem Weevil as against the Turnip Flea Beetle. Reference to these repellent dusts was made in my article<sup>1</sup> in the 'Transactions' of last year, where attention was drawn to the recent work of Petherbridge and Thomas, and also of Miles. with these dusts in the control of Flea Beetles.

4. There appears to be no good reason why a *trap-crop* of early-sown swedes would not offer valuable protection to the later-sown main crop. After the beetles had completed their egg-laying on the trap-crop, the infested plants could be lifted and destroyed. The main crop could then be safely sown. In this regard it is interesting to learn that late varieties of swedes are less susceptible to attack than early ones.

5. In other countries it has been noted that infestations of the Cabbage Stem Weevil are less severe in seasons following winters of prolonged and continuous rain. It is believed that excessive moisture destroys the adults hibernating in the soil.

#### THE CABBAGE ROOT FLY (*Phorbia brassicæ*).

Inquiries concerning the Cabbage Root Fly are annually recurrent, and therefore it will not be amiss to include it in a discussion of important pests of the Cruciferae. It exacts toll from turnips, swedes, radish, cabbage, cauliflower, Brussel sprouts and kale, and is especially severe on seedling plants and young transplants.

*Description of the Fly.*—The insect is one of a large number of dull greyish-black flies that are difficult to distinguish from each other except on the basis of minute characters inappreciable to the naked eye. To the uninitiated, they bear a general resemblance to the house-fly, of which they appear to be a small and slender edition. In order that readers may obtain a general idea of the adult insect I have made a drawing (Fig. 23) of the *female*, enlarged about six times, with the wings and legs outspread so as to display its more prominent characters. In life it measures about a quarter of an inch in length. The eyes are margined with silver, which spreads over the face and cheeks. Between the eyes there is a blackish-brown stripe, which is as broad as an eye. By

<sup>1</sup> Cameron, A. E., 1935. "Insect Pests of 1934." Trans. Highland and Agric. Soc. Scotland, Vol. XLVII., p 118.



contrast. the eyes of the *male* are larger and almost touch each other in the middle of the head.

The thorax or middle region of the female body is light-grey and traversed by three narrow dark bands, which are well seen in the figure. One will also note the four rows of prominent backwardly directed bristles, which arise from the surface of this region and give the insect a bristly appearance.

Two minute stalked knobs, which project one on either side from the hinder-part of the middle region. are the vestigial second pair of wings or balancers, so called because they contain special sense organs that control the equilibrium

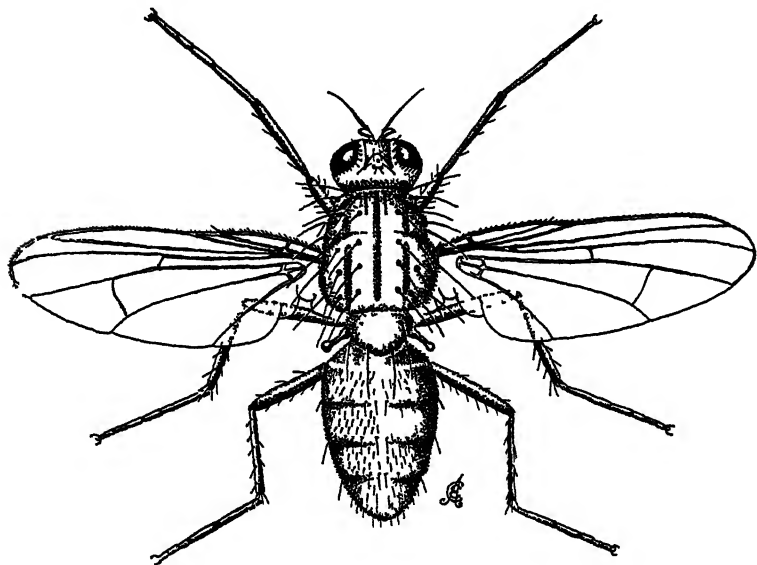


Fig 23.—*Phorbia brassicae*. Cabbage Root Fly. Female.  $\times 6$ .

From nature

of the fly. The reduction of the second pair of wings and their modification as balancers are characters which are shared by all two-winged flies (*Diptera*). The functional or flight wings are transparent, with a slight tawny tinge, which is more pronounced near the bases of the wings. It will be observed that the membrane of the wing is supported by lines called 'veins,' which radiate from the base of the wing to its margin. Behind the small cross-vein near the middle of the wing there is a vein, called the fourth longitudinal, which proceeds straight to the margin. The straight course of this vein is characteristic of the family of two-winged flies (*Anthomyiidae*) to which the Cabbage Root Fly belongs, and serves to distinguish it

from such insects as the House-fly and Blow-flies (*Muscidae*), in which this vein is sharply upcurved before it reaches the margin.

The legs of the Cabbage Root Fly are black and bristly

The hind body (abdomen) is grey like the mid-body, clothed with bristles, mostly short, but longer at the hind margins of each segment.

*Life-history*.—Each year there are three generations of the



Fig. 24 —Eggs of *Phorbia brassicae*, Cabbage Root Fly, at base of stem of cabbage plant.

Slightly enlarged  
in Canada  
No 12, 1916

1711 Gibson and Tieherne, "The Cabbage Root Maggot and its control  
Entomological Branch, Department of Agriculture, Canada. Bulletin

Cabbage Root Fly, of which the flies of the first appear in May, the second in June-July, and the third in August-September. Of these, regarded from the viewpoint of damage committed, the first generation is the most important, since the tender young plants are more susceptible to injury than the more advanced ones attacked by the second and third generations. The period of incubation of the eggs (Fig. 24) is four to five days, and the first-stage *maggots*, which are little larger than the eggs from which they have hatched (1 mm.), make their way down to the root, into which they penetrate

and make galleries, feeding on the soft tissues. Working on the outside, the maggots (Fig. 25) may also destroy the rootlets, which are shorn off. They do not necessarily confine themselves to the root-system, but may burrow in the crowns of swedes and turnips. They frequently occur, too, in the midribs and larger veins of Brassica leaves, supplementing the work



Fig. 25.—Injured root of cabbage showing Cabbage Root Maggots.

About natural size. After Gibson and Treherne, *loc. cit.*

of destruction of the Stem Weevil (*Ceuthorrhynchus quadridens*), to which reference has already been made (p. 89).

*Symptoms of Damage.*—The damage committed by its feeding activities to the parts of the plant above ground are insignificant compared to that done to the roots (Fig. 25). An attacked plant soon begins to show signs of distress. Its leaves first turn bluish, then yellow, and finally collapse.

*Comparison of Stem Weevil and Cabbage Root Maggots.*—Where the maggots of the Stem Weevil and the Cabbage Root Maggot occur together, there should be no difficulty in distinguishing them. Both are legless and white. The well-defined brown head of the Weevil Maggot (Fig. 22) stands out in marked contrast to the ill-defined one of the Cabbage Root Maggot (Fig. 26). The body of the latter tapers to the fore end and is smooth; that of the Weevil Maggot is of uniform thickness throughout, wrinkled, and slightly curved. When full grown, the length of the Cabbage Root Maggot is about three times the length of the Weevil Maggot.

*Control.*—Despite the fact that efforts, extending over a period of about thirty years, have been made to discover a satisfactory method of controlling the Cabbage Root Fly, none has materialised. This is not to say that Cruciferous vegetables of the garden cannot be protected by the timeous application of approved treatments, but such treatments



Fig. 26.—Full-grown larva of *Phorbia brassicae*, Cabbage Root Fly  $\times 10$

From nature. Note the downwardly curved mouth hooks used in mining the roots, and the prominent fleshy tubercles projecting from the margin of the last segment

applied to Cruciferous field-crops are almost out of the question, because of the cost of material and labour.

1. The square, tarred felt-paper discs, provided with a T-shaped slit for adjustment round the stems of transplants, offer a certain degree of protection from infestation during the early stages of the growth of the plant. Their adoption repays the grower of vegetables, but not so the farmer of root-crops.

2. The application of deterrents designed to prevent the flies from depositing their eggs has not been followed by encouraging results, and so recourse has been had to poisonous chemicals, which either destroy the eggs in the soil (Fig. 24) or the maggots soon after they hatch and before they burrow into the roots of the plants. In a series of experiments to test various chemicals planned by Edwards<sup>1</sup> and conducted over a period of three years, it was found that the application of a solution of corrosive sublimate, which was used by

<sup>1</sup> Edwards, E. E., 1934. "Control of the Cabbage Root Fly." Jour. Min. Agric, Vol. XLI.

Treherne<sup>1</sup> in Canada, gave the greatest degree of protection from attack. The corrosive sublimate is dissolved in water in the proportion of 1 oz. of the solid to 8 gal. of water. The treatment consists in applying to each plant about  $\frac{1}{2}$ -pint of the solution so as to flood the soil uniformly round the base of the plants. The first application is made four days after the plants have been set out, and is repeated on two further occasions at ten-day intervals.

3. Of the other materials tested by Edwards in Staffordshire, commercial naphthalene-powder appeared to be promising. Everything else being equal, it has certain advantages over corrosive sublimate, in that it is cheaper, simple to apply, and non-poisonous. In practice,  $\frac{1}{4}$ -oz. of the powder is applied to the soil round the plants three times at intervals of three days, commencing on the day of transplanting. According to Edwards, however, it is not reliable in its controlling effects under various conditions of climate and soil.

4. In the course of conducting his trials, Edwards found that deferred planting reduced the loss from Cabbage Root Fly injury. The later the planting the less was the amount of damage, so that plants set out in the last week of June almost entirely escaped injury. Whilst it is realised that late planting cannot be generally adopted, it would be advisable to defer planting to the latest possible date, having due regard to climate, soil, and market conditions (Edwards).

#### TURNIP AND CABBAGE APHIDES (*Brevicoryne brassicae* and *Myzus persicae*).

Plagues of aphides are periodically reported as destructive to Cruciferous crops. In Britain the two with which farmers are frequently concerned are *Brevicoryne brassicae* (Fig. 27), the Mealy Cabbage Aphis, and *Myzus persicae* (Fig. 28), an omnivorous aphid, which attacks not only Crucifers but also potatoes. Hence it is commonly called the Potato Aphis. The prevalence of these two aphides in south-east Scotland in 1935 marked it as an aphid year, during which swedes, turnips, cabbage, Brussel sprouts, rape, and marrow stem kale suffered considerable damage.

*Life-history.*—The rapidity with which aphides increase in numbers during the summer and autumn, when weather conditions are favourable and the control exerted by diverse parasites and predators proves ineffective, may be readily appreciated. During this period there occurs a progressive increase in the size of the colonies infesting the food-plants,

<sup>1</sup> Treherne, R. C., 1923. "Root Maggots and their Control." Crop Protection Leaflet. Entom. Branch, Dept. Agric., Ottawa

due to the prolificacy of wingless females, each of which, without the intervention of males and, therefore, unimpregnated, steadily produces living young at the rate of about forty during an average life of 36 days. The progeny soon arrive at maturity and repeat the reproduction of their kind. The result is a multiplicity of generations, the legions of which complete the destruction of the plant, which may be already reduced in its vitality by the pernicious effects of drought. This intensive state of overcrowding also reacts on the aphid population, which is stimulated to produce, during late summer, virgin winged females that betake themselves to new food-plants that are colonised and overrun by their progeny. Thus the infestation spreads widely throughout a crop, due entirely to the intense reproductive activity of the virgin females. With the advent of colder weather and probably due to chemical changes occurring in the sap of the food-plants, males and females are differentiated for the first and only time in the course of the annual cycle. The sexes pair, and the impregnated female lays a single fertilised egg, which remains dormant during the winter. The winter host-plant may be one of an entirely different type from that of the summer food-plants. The Potato Aphis, for example, selects certain fruit trees, such as peach and nectarine, for the deposition of its winter eggs. The relative scarcity of these host-trees in districts where the aphid was nevertheless abundant suggested to Davies<sup>1</sup> that there might be an alternative mode of hibernation, and this he discovered in the occurrence of wingless females in winter on the leaves of Savoy and other cabbages, swedes, and rape in North Wales.

The Mealy Cabbage Aphis passes the winter in the egg stage in old stumps of cabbage, Brussel sprouts, or on Cruciferous weeds, but adult wingless females occasionally survive the winter.

*Distinction of Mealy Cabbage Aphis and Potato Aphis.*—The two occurring as they do on the same Cruciferous hosts are nevertheless readily distinguishable in all their generations. The main characters of distinction are applicable to both wingless and winged individuals of the two kinds.

The wingless female of the Mealy Cabbage Aphis, as the popular name implies, is covered with a white mealy wax. It is greyish-green, with eight black spots arranged on each side of the back and increasing in size towards the hind end. The pair of tubes, called 'cornicles,' projecting backwards, one on either side, from the hind-body are black, short, and narrowed at their ends. The Potato Aphis, by contrast, is

<sup>1</sup> Davies, W. M., 1934. "Studies on Aphides infesting the Potato Crop. II. Aphis Survey: Its bearing upon the selection of districts for seed potato production." Ann. App. Biol., Vol. XXI., No. 2.

devoid of a waxy coat. Its colour is variable, green, yellow, or rose. The cornicles are long and slender, slightly swollen, and project well behind the hind margin of the body.

Winged females of the two (Figs. 27, 28) are likewise readily distinguished, not only by the difference in the size of the cornicles, but by the markings on the dorsal surface of the green hind-body or abdomen. In the Mealy Cabbage Aphis there is a series of dark, transverse dorsal bars (Fig. 27), which may be interrupted in the middle. Similar interrupted dark bars occur at the base of the abdomen of the Potato Aphis (Fig. 28), but behind they fuse to form a large dark patch in front of and between the bases of the cornicles. In passing,

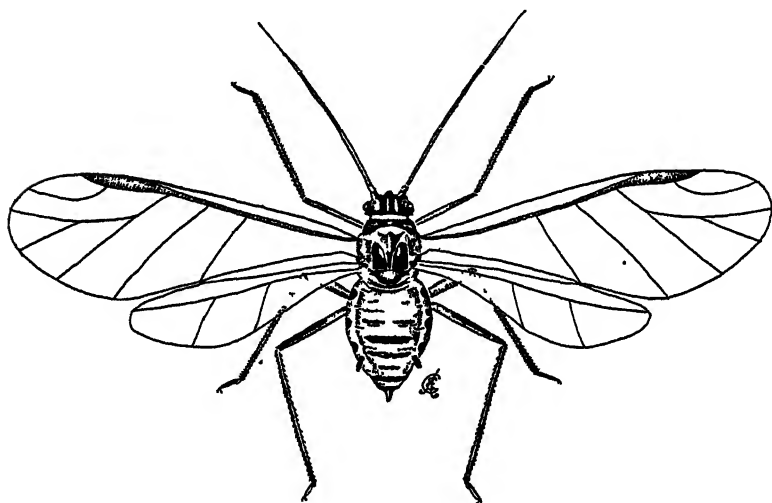


Fig. 27.—*Brevicoryne brassicae*. *Mealy Cabbage Aphis*. *Winged Virgin Female*.  $\times 12$ .

From nature. Note the short cornicles and dark transverse bars on the hind body.

it is well to note that the cornicles are the structures most characteristic of aphides. They emit a substance of a waxy nature that acts as a protection against predaceous enemies. Honey-dew, on the other hand, the sticky secretion which coats the surfaces of food-plants infested by aphides, is passed from the anus of the insect.

*Relation of the Potato Aphis to Virus Diseases.*—Whilst the Mealy Cabbage Aphis confines its destructive activities to Cruciferae, the Potato Aphis achieves an additional interest in that not only does it infest the potato, but conveys to it the injurious virus diseases, mosaic and leaf-roll. The virus,

according to Smith,<sup>1</sup> remains infective in the body of the aphid for at least seven days, without the insect again feeding on an infected plant.

Realisation of the relationship of virus, aphid, and host-plant gives prominence to certain interesting problems pertaining to the Potato Aphid, its food-plants, and reactions to its environment, that have been recently studied by Davies in North Wales. Here, conditions as regards proximity of market-gardens, devoted to the cultivation of Cruciferous crops, to farms with large acreages planted to potatoes, are parallel to those existing in many parts of south-east Scotland, and the Potato Aphid is prevalent in both regions.

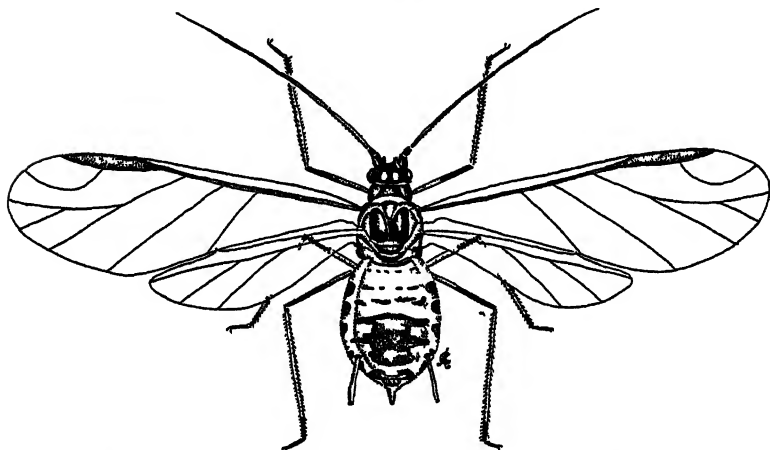


Fig. 28 — *Myzus persicae*. Potato Aphid. Winged Virgin Female.  $\times 12$ .

From nature. Note the long slender, slightly swollen cornicles and the large dark patch on the hinder half of the abdomen. A tubercle (frontal) is also seen on the inside of the base of each antennae, projecting from the head. These tubercles are absent in the Mealy Cabbage Aphid.

Davies (1934), in the paper above quoted, determined that the sudden appearance of the aphid in the potato crop in June and July was attributable to the migration of winged individuals from the stock established by the overwintering wingless forms on cabbages, swedes, &c. According to this author, the threshold of the rapid spread of virus infection in a crop occurs when the aphid population exceeds a hundred per one hundred leaves. Thus it is that winter Brassicas assume considerable importance in reference to virus infection of the potato, the spread of which varies with the density of the aphid population.

Another interesting fact which has emerged from further

<sup>1</sup> Smith, K. M., 1931. 'A Textbook of Agricultural Entomology.' Cambridge, pp. 259-260.



work of Davies<sup>1</sup> is that localities subject to conditions of high relative humidity during the period of migration (June-July) are less liable to infestations of aphides than are those of low relative humidity. Such conditions are frequently found in low-lying districts, almost at sea-level, as in the potato-growing districts of East Lothian. Davies' experiments showed that at temperatures ranging from 55° F. to 90° F., the flight of aphides was retarded with increasing humidities and finally inhibited at 100 per cent relative humidity. Observations in the field served to confirm this same general conclusion. For example, the conditions which prevailed during a period of heavy migration (July 5-11, 1934) in a district of Flintshire, were a combination of high temperatures, low humidities, and slight velocity of the wind.

*Control.*—1. *Natural*—Like other aphides, the Mealy Cabbage Aphis and the Potato Aphis are controlled in nature, in varying degree from year to year, by the predatory maggots of Hover-flies, and the larvæ and adults of Lady-bird beetles. Their destruction is also encompassed by numerous small parasitic Hymenoptera and parasitic fungi. As a rule, these natural agents of control only become effective towards the termination of a season of infestation, when as many as 80 to 90 per cent of the aphides may be eliminated. Aphides that have been destroyed by parasitic Hymenoptera are represented by brown empty skins, that remain adherent to the leaf-surface after the parasite has devoured the internal organs of its host, completed its development within, and escaped from the imprisoning host-shell. A round hole in the empty host-skin, made by the parasite, serves to permit its release.

2. *Artificial*—Attention should first be paid to the disposal of the refuse of Cruciferous plants in order to eliminate, as far as possible, the winter shelters of the aphides. This measure is one of limited significance, where Brassicas are left to grow in the fields during the winter.

So far as the Cruciferæ are concerned, infested plants in the seed-beds should be treated with a Nicotine-Soap spray composed of—

98 per cent nicotine	.	.	.	1 fluid oz.
Soft soap	.	.	.	1 lb.
Water	.	.	.	10 gals.

This spray can also be safely applied to growing crops up to fourteen days before they are harvested.

<sup>1</sup> Davies, W. M., 1935. "Studies on Aphides infesting the Potato Crop. III. Effect of variation of relative humidity on the flight of *Myzus persicae*." Ann. App. Biol., Vol. XXII, No. 1.

1935. "Studies on Aphides infesting the Potato Crop. IV. Notes on the migration and condition of Alate *Myzus persicae*." Ann. App. Biol., Vol. XXII, No. 3.

A 3 per cent nicotine dust applied in the morning at the rate of 50 lb. per acre gives good results.

An effective combined spray for aphides and the Diamond-Back Moth (*Plutella maculipennis*) consists of—

Lead or calcium arsenate	.	.	1½ to 4 lb.
Soft yellow laundry soap	.	.	10 to 25 lb.
Water	.	.	100 gal.

On the potato, aphides are best controlled by a combination spray of—

Nicotine sulphate	.	.	8 to 10 oz.
Bordeaux mixture	.	.	50 gals.

It is recommended that two or three sprayings should be made at intervals of 10 to 14 days, the first when the plants are five to six weeks old.

#### THE DIAMOND-BACK MOTH (*Plutella maculipennis* (*cruciferarum*)).

This insect is an annually recurring pest of cultivated Cruciferous crops, but whereas it becomes abundant in warm dry summers and commits much destruction, its numbers are negligible during wet, cold seasons, since the caterpillars are intolerant of rain, which appears to retard their development. In the south of Scotland last year, the weather conditions of the summer months proved favourable for its increase, with the result that reports of damage were received from several localities, particularly the south-east coast. On the whole, the infestations reported were ones of moderate intensity, affecting turnips and swedes. There was one instance, however, which came under my personal observation, where the Diamond-Back Moth, aided by the Turnip and Cabbage Aphides, was responsible for almost the total destruction of a crop of rape in East Lothian. An adjacent crop of marrow stem kale, which was also infested, did not show the effects of attack to the same degree.

*Life-history.*—There are two generations per annum. The *moths* (Fig. 29 A), which first appear on the wing in June, are one-third of an inch in length, with a wingspread of two-thirds of an inch. At rest the wings, tip-tilted at the end, are held in a sloping posture over the back, so that the hind margins of the brown fore-wings are contiguous along the middle line. Each of these wings has three yellowish triangular marks along its hind border. The apposition of the corresponding marks of either wing when at rest produces

the characteristic diamond-pattern, from which the popular name of the moth is derived.

The *eggs* are deposited on the under-sides of the leaves, either singly or in small groups, and they hatch in a few days. The *caterpillar* (Fig. 29 B), which is grey on hatching and possesses a small black head, burrows into the leaf, making a mine, which it later abandons to feed openly on the surface. The older caterpillars are greenish with a pale yellow head, and are sparsely invested with short bristles. They are

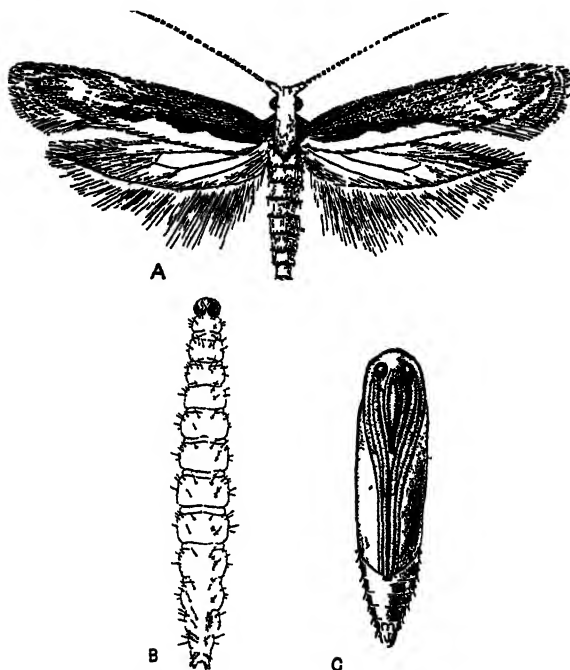


Fig 29.—*Plutella maculipennis* *Diamond Back Moth* A, adult, B, larva, C, pupa.

Enlarged After Marsh, from Smith, "Agricultural Entomology", 1931.

half an inch when full grown. When disturbed, they respond quickly by wriggling off the leaf, to which, however, they retain an attachment by a suspending silken thread. Growth is completed in about three weeks, during which they skeletonise the leaves. The attacks become most serious in July, particularly if the plants have been retarded in their growth by a preceding drought.

The *pupa* (Fig. 29 C) occurs in a delicate silken cocoon, open at both ends, attached to the leaves of the food-plant. In the

summer the adult moth emerges from the pupa after about two weeks. The winter is spent as pupæ of the second generation.

*Control*.—1. Treat infested plants with a mixture of soot and lime, in the proportions of three parts of soot to one part of lime. It should be applied at the rate of two to six bushels per acre.

2. Dislodgment of the caterpillars is effected by dragging branches attached to a scuffler over the infested crop. This is followed by a horse-hoe to bury the dislodged caterpillars.

3. Mixtures of tobacco dust and fresh slaked lime, applied as a dust, have been said to have given good results. The proportion is one ounce of tobacco dust and four ounces of lime. The mixture is dusted on the plants when they are wet with dew.

#### NUMBER OF STAGES OF THE MAGGOTS OF OX WARBLE FLIES (*Hypoderma lineatum*, *H. bovis*).

Although there has been much variance of opinion concerning the number of larval stages of *H. lineatum* and *H. bovis*, it had come to be generally accepted, following Laake,<sup>1</sup> that five were recognisable during the period extending from the hatching of the larvæ and their entrance of the host, to the abandonment of the latter and their pupation in the ground. There were, however, certain authors, including MacDougall,<sup>2</sup> who maintained there were but four stages, whilst still others, such as Geddoelst<sup>3</sup> and a few German authors, would admit the existence of but three stages. In view of this uncertainty and conflict of opinion, it was evident that only an intensive examination of the structure of a large series of larvæ of different ages, recovered from the gullet and subcutaneous tissues of the host, would serve to decide the issue. This has at last been accomplished by Knipling<sup>4</sup> of the United States Bureau of Entomology, who has recently published the results of his investigations. In order to appreciate their significance, it may be recalled that the larva of the Warble Fly on hatching from the egg (Fig. 30) measures about half a millimetre in length. Penetrating the skin of the host, it begins its long

<sup>1</sup> Laake, E. W., 1921. "Distinguishing characters of the larval stages of the Ox Warbles." Jour. Agr. Research, Vol. XXI.

\_\_\_\_\_ 1924. "Further observations on the moults of the Ox Bots." Jour. Agr. Research, Vol. XXVIII.

<sup>2</sup> MacDougall, R. S., 1930. "The Warble Flies of Cattle." Trans. Highland and Agr. Soc. Scot., Vol. XLII.

<sup>3</sup> Geddoelst, L., 1922. "Le trimorphisme larvaire des Oestrides." Soc. Biol., Vol. LXXXVI.

<sup>4</sup> Knipling, E. F., 1935. "The larval stages of *Hypoderma lineatum* and *Hypoderma bovis*." Jour. Parasitol., Vol. XXI.

journey to the gullet (*Hypoderma lineatum*<sup>1</sup>) (Fig. 31), where its length is found to have increased to 12 millimetres. Arriving at the back, the larva is now 12 to 16 millimetres in length. This protracted migration through the tissues of the ox-host occupies about five to six months, and it is significant that during this period, despite the numerous larvæ examined by various investigators in different countries, not a single one has been observed in the process of moulting.



Fig. 30.—First stage larva of *Hypoderma bovis*.

Much enlarged. After MacDougall,  
"The Warble Flies," Trans.  
Highland and Agric Soc., 1934.

Heretofore, following Laake, it has been the opinion, based on the supposed changes of the spiny investment of the larval skin, correlated with apparent changes in the proportion of the mouth-parts, that the larva underwent two moults during this period, resulting in the differentiation of the first three of the five larval stages. By making actual counts of the spines on a particular area of larvæ of different sizes, Knipling has, however, contrived to prove that the apparent modifications of the spiny armature are due not to replacement of the old spines at moulting by new ones, but to a rearrangement of the spines borne by the maggot on hatching and dispersed by the expansion of the integument with growth. Naturally, the individual spines, which are readily discernible in the newly hatched larva, become relatively smaller and less distinct as the maggot increases in size, so that by the time it has attained a length of 12 millimetres it appears to be devoid of spines, except for a few enlarged ones at the fore and hind ends. This was the third-stage larva described by Laake as spineless, but now recognised, in the light of

Knipling's investigations, as the full-grown first-stage larva.

It is interesting to note that MacDougall, already quoted, was hesitant in accepting the existence of Laake's so-called spineless third-stage larva, but he appeared to entertain no doubts about there being at least four larval stages. In view of Knipling's work, it may now be safely assumed that there are but three larval stages, of which the first persists from the time of hatching until it makes its first appearance on the back

<sup>1</sup> *Hypoderma bovis* rarely, if ever, visits the gullet on its way to the back.

of the host and perforates the hide, establishing communication of the parasite with the exterior. The larva then undergoes its first moult and the second-stage maggot (Fig. 32) appears, varying in length from 13 to 18 millimetres. This latter stage lasts for three to five weeks during the period February-March. After a second moult, the third or last larval stage (Fig. 33), now 16 to 26 millimetres in length,

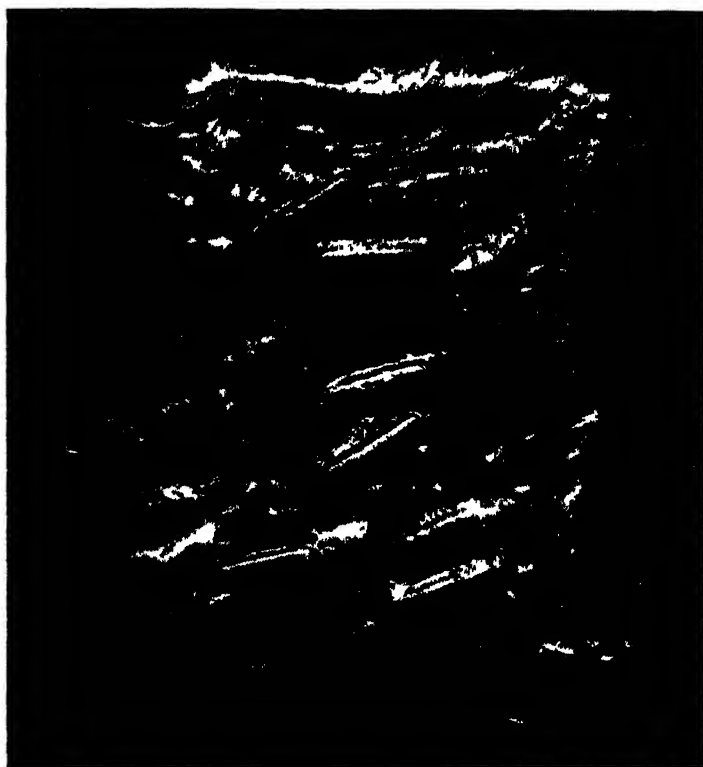


Fig. 31.—*First-stage larvae of Hypoderma lineatum in gullet of Ox.*

Natural size. After MacDougall, *loc. cit.* According to Knippling's investigations the larvae in the gullet are still in the first stage.

appears in the warble-cyst bathed in pus and serous exudates, and accompanied by the two collapsed moulted skins. It attains full development in five to six weeks (April-May), when it emerges voluntarily through the previously made perforation of the hide and drops to the ground. Emergence usually occurs in the early morning, and each individual maggot completes its exit in one to three minutes.

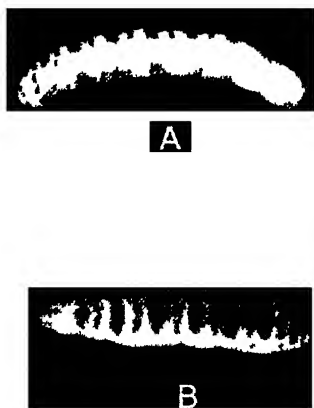


Fig. 32.—*Second-stage larvæ of Hypoderma lineatum.* A, *side view* ;  
B, *ventral view.*

Much enlarged. After Bishopp, Laake, Brundrett and Wells, "The Cattle Grubs or Ox Warbles," U.S. Dept. Agric., Bull. 1869, 1926. The figures in the American publication here quoted are labelled fourth-stage larvæ. In the light of Knippling's investigation, they are really second-stage.

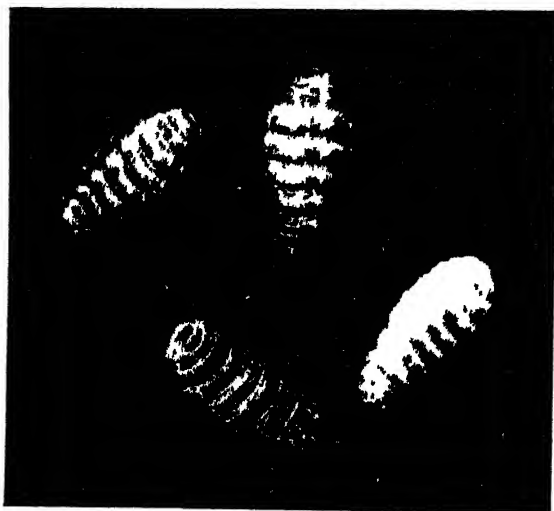


Fig. 33.—*Final- or third-stage larvæ of Hypoderma bovis.*

Natural size. After MacDougall, *loc. cit.* These larvæ were previously considered to be fifth-stage. According to Knippling they should now be recognised as third-stage.

Thus the contention of Geddoelst that the maggot of the Ox Warble Fly has but three stages has been amply justified by Knipling, in which respect it agrees with all other related Warble and Bot Flies, which are considered as having three larval stages. Whilst the question of larval stages is one more of biological than economic significance, it is interesting to learn that, in their early development, Warble Flies do not deviate from the normal number of two moults and three larval stages, despite their protracted stay in the host animal.

### BIBIO FLIES OR MARCH FLIES.

Last year several inquiries were addressed to my department concerning the habits and destructiveness of the maggots of Bibio Flies. These inquiries came from farmers and members of Bowling Clubs in Perthshire, Fifeshire, West Lothian, and Selkirk. The maggots from bowling greens were in all cases those of the Fever Fly, *Dilophus febrilis* (Fig. 34 A), whilst those sent by a Selkirkshire farmer were *Bibio lacteipennis* (Fig. 34 B). The period over which the inquiries were made extended from the third week of March until the middle of May.

*Comparison of Bibio maggots and Leather-Jackets.*—The family to which Bibio Flies or March Flies belong is closely related to that of the flies known as Daddy-Long-Legs or Crane Flies, with the maggots of certain of which farmers are familiar under the name of Leather-Jacket or The Grub. The maggots of the March Flies have habits identical with those of the Leather-Jacket, in that they are found feeding at the roots of a variety of food-plants, including grass, cereals, root-crops, vegetables, and seedling trees in forest nurseries. The two are readily distinguishable. The full-grown Leather-Jacket measures  $1\frac{1}{2}$  inches in length, whilst that of the Bibio Fly is about half an inch. Both kinds are legless, but whereas the head of the Leather-Jacket is retractile into the body, that of the Bibio maggot is kept permanently protruded. The last body-segment of the Leather-Jacket is cut squarely across, and there project from its margin three pairs of fleshy retractile processes, together with a central pair below the prominent spiracles on the hind surface of the segment. The most evident distinction of the two kinds is the presence of encircling bands of short fleshy semi-erect tubercles on the body-segments of the Bibio maggot, which are well seen in Fig. 34, A and B. These tubercles are longest on the last two segments. They are not represented in the Leather-Jacket. Another good contrasting feature is to be found in the number of spiracles or breathing pores, of which there are ten lateral



pairs in the Bibio maggot, whilst there is but one pair on the last segment of the Leather-Jacket.

*Life history*—Our knowledge of the life-histories of Bibio Flies rests mainly on the studies of Morris<sup>1</sup>. In his paper of 1922 he discusses the Fever Fly (*Dilophus febrilis*). The female was observed to burrow into the soil to a depth of about an inch, and the eggs were laid in a mass at the end of the burrow. The individual egg is about half a millimetre long, white, cylindrical, and rounded at the ends. It hatches in about three weeks. In the development of the larva, there are four larval stages, of which the final full-grown stage is about half an inch long. The bands of tubercles on each



Fig 34—A Full grown larva of *Dilophus febrilis*. Fever Fly  $\times 10$   
From nature Note the comparatively sparse body tubercles  
three openings The hindmost spiracle has

B Full grown larva of *Bibio lacteipennis*  $\times 10$   
From nature Note the more numerous but relatively smaller body tubercles as compared  
with those of the Fever Fly Maggot The hindmost spiracle has but two openings

segment are prominent but relatively small and slender. The last pair of spiracles on segment twelve is larger than the remainder, and each is perforated by three holes. In colour the larva is light-brown.

The larvæ are markedly gregarious in their habits and occur in clusters in lawns and bowling greens, either on the surface or at depths up to half an inch. According to Dawson,<sup>2</sup> they are less destructive to turf than Leather-Jackets, their acti-

<sup>1</sup> Morris, H. M. 1917  
Ann. App. Biol. Vol. IV  
1921 The larval and pupal stages of the Bibionidae—Part I

Bull. Entom. Research, Vol. VII  
1922 The larval and pupal stages of the Bibionidae—Part II Bull.  
Entom. Research, Vol. VIII  
<sup>2</sup> Dawson, R. B., 1931 Leather Jackets' Jour. Greenkeeping Research,  
Vol. II

vities being denoted by a local thinness of the grass in the vicinity of the clusters. Since the flies are said to be attracted to manure for egg-laying, it is suggested that the maggots are frequently introduced into gardens and fields with the manure. Garden-plants, hops, and potatoes have all been recorded as subject to their attacks.

The full-grown larva pupates in the soil. The *pupa* is slightly smaller than the larva, whitish, cylindrical, and tapering behind. In appearance it is mummy-like. After a period of about three weeks the flies emerge. According to Morris, there are probably two generations per annum, the flies appearing in May and again in August and September.

The development of *B. lacteipennis* is parallel to that of the Fever Fly, but Morris (1921) makes no reference to the number of its annual generations. The larva (Fig. 34 B) is readily distinguishable from that of the Fever Fly (Fig. 34 A) by its possession of a greater number of fleshy tubercles, which are, however, more slender and relatively more elongated. Comparison of the last pair of spiracles in both shows that the larva of *B. lacteipennis* has two perforations, whilst that of the Fever Fly has three. Specimens of the former that were sent to my department by a Selkirkshire farmer on 20th March 1935, were accompanied by the statement that the larvæ occurred in large numbers in a pasture, of which about eight acres showed signs of damage the previous autumn. The remainder of the inquiries concerned damage done to bowling greens in various districts by the maggots of the Fever Fly. In all cases it was considered that the maggots were either the sole cause of, or contributed substantially to, the destruction of the turf.

*Control.*—1. Effective control of the maggots is achieved by the application of naphthalene broadcast at the rate of 2 to 3 oz. per square yard over the affected turf. Rolling the turf not only accomplishes their destruction but renders it firmer and more able to withstand attack.

2. Dawson recommends for trial an emulsion of orthodichlorobenzene consisting of the following ingredients :—

16 parts by volume orthodichlorobenzene.

4	„	10 per cent sodium oleate solution.
4	„	Jeyes' Fluid.

The components are placed in a barrel and stirred until the mixture reaches the consistency of blanchmange, when a further part of Jeyes' Fluid is added. For use, the stock-emulsion is diluted one part to 400 parts of water and applied at the rate of one gallon per square yard of turf. The 10 per cent solution of sodium oleate is made by dissolving 1 lb. of sodium oleate powder in 1 gallon of hot water. The cost of

treating 500 square yards of green varies between eight to twelve shillings, depending on the amount made up. It is said to be more reliable than naphthalene.

3. The foregoing measures are mainly applicable to infestations of bowling greens and golf courses. In *pastures* necessity for the application of special treatment rarely arises, but where it does, treatment of the infested areas would be best accomplished by the broadcasting of naphthalene in the dosage mentioned above.

#### THE DOUGLAS FIR ADELGE (*Adelges* (*Chermes*) *cooleyi*).

In the 'Transactions' of the Society for 1922 and 1923 MacDougall referred to this serious imported American pest of Douglas Fir and Sitka Spruce, which had been the subject of investigation by Chrystal,<sup>1</sup> first in Canada and later in Britain. In his British studies, which ranged over both England and Scotland, Chrystal failed to find on the Sitka Spruce the stem-mother or foundress generation (*fundatrix vera*) (Fig. 35), and the *gallicolæ* or gall-dwellers (Fig. 37), which were considered by him to be non-existent in Britain by reason of the failure of the preceding sexual generation. This deficiency of generations was further considered to be a matter for congratulation to the interests of British Forestry, as indicated by the following quotation from MacDougall in the 'Transactions' of 1923. He says, "It will be fortunate for the Sitka Spruce in Britain if this failure of the sexual generation be constant, for this will mean the absence of galls on the Sitka, and the gall-causing and gall-inhabiting generations do proved harm in America."

As a result of investigations conducted by me at Glen Tress, Peeblesshire, and elsewhere in Scotland in 1935, I succeeded in finding the missing generations and thereby have been able to supply the two important links which complete the chain of five generations, of which three, the first, second, and fifth in the list of generations which follows, are bred on Sitka Spruce, the third and fourth on the Douglas Fir. These generations are—

- I. *Fundatrix vera*, foundress or stem-mother of Sitka Spruce.
- II. Winged *gallicolæ*, gall-dwellers on Sitka Spruce, migrating to Douglas Fir.
- III. *Colonici, fundatrix spuria*, stem-mother of Douglas Fir. This generation includes at least three annual broods, a winter and two summer.

<sup>1</sup> Chrystal, R. N., 1922 "The Douglas Fir Chermes (*Chermes cooleyi*)."  
Forestry Commission, Bull. 4

IV. *Sexuparæ*, winged migrants from Douglas Fir to Sitka Spruce.

V. *Sexuales*, on Sitka Spruce.

Completion of the life-cycle requires two years, but a partial cycle involving only generations III. and IV. can be repeated indefinitely on Douglas Fir, the secondary host, in the absence of Sitka Spruce, the primary host. In this event, the



Fig. 35.—*Adelges cooleyi*. *Fundatrix* on Sitka spruce

Natural size. From nature. Glen Tress, Peeblesshire. The foundress is enclosed by white wax at the base of the terminal bud of a shoot of Sitka spruce. The eggs laid by the foundress had hatched and the progeny or young gallinæ had entered the terminal bud, which is retained in its growth as compared with the right lateral bud. The left lateral bud had been killed by frost.

*sexuparæ* or winged migrants of generation IV. perish for lack of the primary host, since they do not remain on the Douglas Fir and deposit their eggs.

In addition to the Sitka Spruce, I have found that the White Spruce (*Picea alba*) is also a true primary host in Scotland. Typical galls of *Adelges cooleyi* were found two years ago by Dr W. B. R. Laidlaw, himself a forest entomologist, in a shelter-belt of this conifer on his property, St Helens, Melrose. Dr. Laidlaw suspected their identity at the time

of their discovery. Besides their occurrence on Sitka Spruce at Glen Tress, Peebles-shire, they have also been found by me on this same host-tree at Stobs, Melrose, Galashiels, Dreghorn, and Murthly. There would thus appear to be little doubt but that the insect is becoming well established on its primary host in Scotland.

The initial discovery of the galls at Glen Tress was a chance occurrence in the course of a Forestry Excursion of Edin-



Fig. 36 — *Adelges cooleyi*. Living gall completely developed, on Sitka spruce.

Related to — From nature. The bud below the gall had been destroyed by frost.

burgh University students on 7th February 1935. Mr D. C. Fergusson, Lecturer in Forestry, drew my attention to certain dead galls, which were fairly abundant on the Sitka Spruce and quite different in size and form from those of *Adelges abietis* and *Unaphalodes strobilobius* also present on the Sitka. My curiosity was aroused by their resemblance to the galls of *A. cooleyi*, which I had seen several years previously on Sitka Spruce in Stanley Park, Vancouver, British Columbia. Curiosity could only be satisfied by making a thorough investigation, which was conducted both in the field and

laboratory throughout the rest of the year. I followed the development of the five generations and was able to observe the formation of the living galls by the progeny of the Spruce foundress and trace the winged *gallicolæ* (Fig. 37) back to the Douglas Fir.

A full account of the investigation is now in the Press and will appear in August 1936 in the 'Annals of Applied Biology,' Vol. XXIII., No. 3. I shall, therefore, postpone the presentation of further particulars to a future report in the 'Transactions' of the Society.



Fig. 37 —*Adelges cooleyii*. Two specimens of winged *gallicolæ* egg-laying on a needle of Douglas fir.

Much enlarged. From nature. Photo by R Carrick

The photograph, of which Fig. 37 is a reproduction, was kindly made for me by Mr R. Carrick, B.Sc., who is a research student in my department.

### THE MUSK RAT (*Fiber zibethicus*).

*Statement of the Problem.*—The menace of the Musk Rat (Fig. 38) in Britain was discussed in the 'Transactions' of the Society in 1932<sup>1</sup> and again in 1933.<sup>2</sup> It is, therefore, at the risk of a certain degree of repetition, but also for the purpose of emphasising recent developments, that the subject is once more brought to the attention of the Society's members. It will be recalled that the Musk Rat was imported into Britain about nine years ago by private individuals, whose intention it was to breed the animal for the sake of its pelt, under conditions of natural but restricted confinement. It soon became apparent that the Musk Rat was not willingly

<sup>1</sup> MacDougall, R S. 1932. "Insect and other enemies of 1931." Trans. High. & Agr. Soc. Scotland, Vol. XLIV., pp. 147-151.

<sup>2</sup> ——— 1933. "Insect and other animal pests of 1932." *Ibid.*, Vol. XLV., pp. 74-77.

disposed to accept the conditions of a partial confinement. Unwittingly helped by defective wire-fences enclosing the marshes in various parts of the country into which it was introduced, it soon discovered or made loopholes through which it gained complete freedom. In its subsequent meanderings it spread into and populated areas where its subterranean activities threatened destruction by subsidence to the embankments of rivers, streams, lakes, and ponds. Soon it became apparent that the Musk Rat, confined to the circumscribed limits of a small pre-selected swamp, represented an



Fig. 25.—*Fiber zibethicus* Musk Rat in sitting posture.

Photograph of the specimen, Zoology Department, Edinburgh University.

entirely different problem from that of the Musk Rat which was free to choose its own terrain. Realisation of its actual and potential destructiveness made it incumbent to enforce stringent measures of control with a view to preventing a repetition of the baleful history that has so frequently attended the haphazard importation of animal and plant species from one country to another. Luckily, the results attendant upon the prosecution of these measures have been most encouraging, but the time has not yet arrived when vigilance can be relaxed.

It cannot be too frequently reiterated that the alien Musk Rat, valuable as it may be as a fur-bearer in the wilds of

North America, can find no useful niche in the agricultural districts of Britain. In the country of its origin, as I have had ample opportunity of observing, it occupies wide stretches of swamp and muskeg, unsuited to agriculture and often far from human settlement. Under such conditions it rarely impinges upon human activities, except in so far as it is trapped for its fur in autumn and winter. In Britain, too, it must be remembered that there is a lack of the predatory carnivores that exercise upon the Musk Rat a certain measure of biological control in North America.

To those who were acquainted with the destruction which followed in the wake of its spread in Central Europe subsequent to its introduction into Bohemia in 1905, it may seem remarkable that its introduction into Britain in 1927 passed unquestioned. Whilst the results attendant on its spread have been the same in both cases, some consolation is to be derived from the fact that realisation of the potential destructiveness of the Musk Rat was quickly appreciated in Britain, with the result that restrictive legislation and eradication measures were soon enforced, and have gone far to repair the damage due to initial lack of foresight.

*Description.*—The Musk Rat or 'Musquash' (Fig. 38) is indigenous to North America. It measures 20 to 21 inches in length and weighs from  $1\frac{1}{2}$  lb. to  $2\frac{1}{4}$  lb. According to Nelson,<sup>1</sup> whose interesting account of the animal should be consulted, it is three or four times the size of the common House Rat, to which it bears a superficial resemblance. The body is compact, legs short, hind-feet strong, partly webbed and otherwise modified for swimming. The long tail, scaly and sparsely haired, is about 10 inches long; it is laterally compressed and functions as a rudder in the water. The brown fur, which is nearly as fine and dense as that of the Beaver, provides protection against the cold water, in which so much of its life is spent.

*Habits.*—In marshes near shallow lakes or bordering sluggish rivers, the presence of the Musk Rat is betrayed by its roughly conical 'lodges' or houses (Fig. 39) which stand two to three feet high above the surface of the water, whilst the foundations in shallow water are several feet broader. These houses are made of the roots and stems of aquatic plants with a mixture of mud. The interior is occupied by an oval chamber, well above the water-level, and is entered by one or more passages opening under water. These houses are mainly for the winter use of the family. Occasionally the progeny, of which there are five or six in each of the two or

<sup>1</sup> Nelson, E. W., 1918. 'Wild Animals of North America.' Washington, pp. 513-516.



three annual litters, is born in the 'lodges,' as well as in large grass nests among dense marsh vegetation. It is the marked fecundity of the Musk Rat which has enabled it to hold its own in America from year to year despite intensive trapping, the season for which is restricted to autumn and winter when the fur is in prime condition. Incidentally, its status as a fur-bearer in swampy areas useless for agriculture in North America may be appreciated from the statement of Ashbrook<sup>1</sup> that the fur yields as much revenue as crops grown in neighbouring arable land.

Where the banks of streams or lakes are steep, the Musk



Fig. 39.—*Fiber zibethicus*. A Musk Rat lodge

From photograph kindly loaned by Mr T. Munro, Department of Agriculture for Scotland

Rat makes its home in dry chambers in the banks above water-level. Access is provided by a tunnel, often difficult of discovery, which opens either under or close to the water-level. In the vicinity of such places worn trails lead up the banks, and well-defined runways are made through the marsh reeds of their haunts.

Musk Rats are nocturnal in their habits, but are frequently active during the day. In northern Saskatchewan I have frequently observed them of an evening perched on the banks of a pond or lake, whence they would plunge into the water

<sup>1</sup> Ashbrook, F. G., 1928. "Recommendations to beginners in fur farming." U.S. Dept. Agr. Leaflet, No 27

with a loud splash when disturbed. It is their mode of life in sub-aquatic burrows which renders the task of the Musk Rat trapper far from simple.

*Food.*—The food of the Musk Rat consists chiefly of the roots and stems of succulent aquatic plants, varied with a few fresh-water mussels and an occasional fish or bird. In marauding expeditions they do not disdain a meal of cultivated vegetables, and they are thus likely to prove a nuisance where their haunts are not far removed from gardens. Against the onset of winter, during which they remain active, they accumulate and store up roots and other vegetable material. The roots of which their 'lodges' are constructed may be used for food in winter. During this season they do not wander far from home.

*Migration.*—The migratory proclivity of the Musk Rat cannot be wholly ascribed to its efforts to relieve the pressure of overcrowded conditions in old-established haunts. Migration may occur even where an environment is capable of supporting a population of greater density than is known to exist there; and so, in our ignorance, we can only attribute the phenomenon to an inherent urge of wanderlust.

From a study of the record of captures of Musk Rats in Britain, both Warwick<sup>1</sup> and Munro<sup>2</sup> have demonstrated that the migratory activity of the Musk Rat is most marked in the spring during the breeding season, when the males wander farther afield than the less active females. The latter tend to settle in places suitable for reproduction. A less intense migration occurs again in the autumn, which is mainly restricted to movement within the infested area and is not usually concerned with an extension of the range into new habitats. This later migration is mainly confined to individuals of the first litter. The ultimate result of this natural migration is a steady spread of the Musk Rat, which may be augmented by sudden or gradual changes in the physical conditions of the habitat due to flooding or drought, compelling the Musk Rat to abandon such quarters as have been rendered uninhabitable by these factors and to seek new sites.

*British Campaigns of Control to 1934.*—The first step in the accomplishment of a reduction of the Musk Rat population in Britain was taken in 1932 with the passing by Parliament of the Destructive Imported Animals Act in March, whereby the keeping of Musk Rats by private individuals was declared

<sup>1</sup> Warwick, T., 1934. "The distribution of the Musk Rat (*Fiber zibethicus*) in the British Isles." Jour. Animal Ecol., Vol. III., No. 2, pp. 250-267.

<sup>2</sup> Munro, T., 1934. "Musk Rats in Scotland." Scot. Jour. Agric., Vol. XVII., pp. 94-98.

illegal. This enactment was supplemented by an order in March 1933, which prohibited the import and maintenance of Musk Rats in Britain as from 1st April 1933. Similar laws were passed by the legislatures of the Isle of Man and the Irish Free State. At the same time, the Ministry of Agriculture and the Department of Agriculture for Scotland were empowered to institute campaigns with a view to the eradication of the pest in areas known to be severely infested in Shropshire, Surrey, Sussex, and Perthshire. A similar campaign was also begun in County Tipperary. In England the Ministry of Agriculture made a grant to the Bureau of Animal Population, Oxford University, to conduct a biological survey of the Musk Rat in Shropshire. According to Warwick (*loc. cit.*), who was delegated by the Bureau to this work, the various campaigns achieved, up to July 1934, the destruction of 2672 Musk Rats in Shropshire, 52 in Surrey, 159 in Sussex, 910 in Scotland, and 356 in Ireland. Further, it was estimated that previous to the inception of the campaigns a total of about 350 had been destroyed by private individuals in Shropshire, Sussex, and Scotland. These figures serve to illustrate the extent of the problem which had to be faced.

*Scottish Campaign.*—So far as Scotland was concerned, the infested territory of the midlands had been entirely populated by the progeny of a stock of five females and four males, which escaped from a field at Feddal, Braco, in Perthshire, where six pairs were introduced from Canada in 1927. Using the waterways of the Forth, Teith, Earn, and Allan, their progeny spread into small tributary streams and passed to adjacent ponds, lochs, marshes, and ditches.

According to Munro (1934) a trapper was assigned to each one of ten areas, Bridge of Earn, Crieff, North and South Auchterarder, Carsebreck, North and South Stirling, Gar-gunnoch, and North and South Thornhill. It was the trapper's duty to inspect every ditch and piece of water with a view to the discovery of Musk Rats. A steel trap, with bevelled jaws set one-eighth of an inch apart and equipped with a chain three feet long, is reported to have given the best results. It was set either in the burrows, or, during periods of migration, in the runs at the margins of infested streams. It is encouraging to learn that, as a result of the campaign in Scotland, Musk Rats, so far from spreading, are now absent in certain areas once heavily infested, and are considerably reduced in numbers in others.

For the following summary account of the Scottish infestation in 1935, I am indebted to Mr Warwick, who has been in close touch with the work carried on by the Department of Agriculture. From January to mid-November 1935 the official trappers captured only 11 Musk Rats as against

a total of 151 in 1934. As an alternative to the steel trap, fish-baskets stretched on an iron frame were used. The latter, which were set in ditches, are employed in Central Europe, and it is suggested that they may be useful for catching isolated wanderers, which ordinarily elude the wary trapper. During 1935 the Musk Rat would appear to have been restricted to a few localities in Perthshire. The backwater of the Earn at Kirkton-of-Mailer, near Bridge of Earn, and the marsh of the Broom of Dalreoch, near Dalreoch Bridge, have proved to be its last strongholds. Early in 1935 a Musk Rat was killed at Loch-an-Erie Pool, Gleneagles Golf Course, the last of a small colony which had infested the locality in 1934. On 9th February 1935 a male was captured in a small marsh at Tullybanocher, Comrie, near, but having no direct communication with, the River Earn. This was probably an isolated wanderer. A parallel instance was that of a Musk Rat killed on a street at Broughty Ferry at 4 A.M. on 16th June. This specimen was probably a migrant from the Earn *viâ* the Firth of Tay. The fact that there was no report of captures during 1935 in the Carsebreck area, in the Allan Water, and the Forth above Stirling, makes it appear likely that the Musk Rat has been exterminated in these places. From June to October not a single Musk Rat was captured by the trappers, but in November one was taken at Broom of Dalreoch.

Reviewing the various campaigns in Britain, it may be said that each has been successful in reducing the population of Musk Rats to a low level. Incidentally, with this reduction, the difficulty of detecting the survivors has become proportionately increased. A critical stage has thus been reached which warrants relaxation of neither vigilance nor effort, lest the previous good results are rendered fruitless. The importance of captures now made cannot be under-estimated, in view of the prolificacy of the Musk Rat and the risks of its resurgence.

## THE TREND OF CHANGES IN THE AGRICULTURAL ECONOMIC SYSTEM.

By SIR JOHN B. ORR, M.D., D.Sc., F.R.S., &c.

AGRICULTURE is in the throes of revolutionary changes. Mechanisation and the application of biological science are bringing about new methods of production which are being gradually absorbed into practice. The adjustment of the industry to these modern developments is in itself a task sufficient to tax the ingenuity of the leaders of the industry. At the same time as these changes in practice are taking place, the whole agricultural economic system has been thrown into the melting pot. The *laissez-faire* of free imports and individual freedom in buying and selling, under which our methods of marketing and distribution have grown up, is being replaced by a protected system involving tariffs, restriction of imports, and compulsory regulation of both production and distribution. We are now in the midst of great experiments in organisation, in an attempt to work out a planned agricultural system. In the present transition stage we are too close to the events to appreciate their full significance. It is difficult even for those who are framing the new system, and who are battling with all the difficulties which are inevitable to a period of transition, to see clearly the position in all parts of the agricultural field, and keep a clear view of the objective being aimed at. We are proceeding on the method of 'trial and error,' and ideas are changing with experience. It is too early yet to say what the final form of agricultural organisation will be, or even to be sure of the principles on which it will be based. The historian of the future will see and understand, much better than we do, the events of the past few years in their proper sequence and significance. At the present stage it would be unwise to do more than make some comments on the developments which have led to the present position and on the measures being used to transform the old *laissez-faire* to a new and, we hope, better system of a planned agriculture.

### EFFECT OF WORLD ECONOMIC CRISIS.

Let us consider first the events which led to the necessity for drastic changes in our agricultural economic system. The present agricultural depression which followed the world

economic crisis of 1929 is, both in severity and extent, the worst of which we have any record. The collapse of prices which began in 1929 affected all countries. The effect of the collapse in prices was accentuated because in the previous seven or eight years agriculture had been painfully adjusting itself to the gradual fall in prices which succeeded the slump of 1921. In Europe and America, and in the British Dominions, which depend for their prosperity on the export of agricultural products, farmers were faced with bankruptcy. Many of their products could not be sold except at prices below the cost of production. Hence mortgages could not be paid, and farmers had less and less money to purchase industrial products. The agricultural depression thus reacted on and accentuated the depression in other countries and in world trade.

At first sight the cause of depression seemed to be over-production, because there was a surplus which could not be marketed at a price to cover the cost of production. The remedy, therefore, appeared to be to raise prices by curtailing production. In America, stocks of cattle and pigs were ruthlessly reduced and the acreage under cultivation restricted. In European countries which imported foodstuffs, the restriction was applied to imports.

Subsequent examination of the position, however, has thrown doubts upon the assumption that the cause of the slump was over-production. The following table taken from the League of Nations' 'World Production and Prices, 1925-34,' compares changes in agricultural production with those in industrial production. Production in the years 1925-1929 is taken as 100.

INDEX NUMBERS OF WORLD PRODUCTION (1925-1929=100) [1].

	1925.	1926	1927.	1928.	1929.	1930.	1931.	1932.	1933.	1934.*
All agricultural products . .	97	97	99	103	103	104	103	104	104	101
Crude foodstuffs	97	97	99	104	103	104	102	105	104	102
Industrial activity . .	91	94	99	104	112	100	89	78	88	96

\* Estimate.

These figures show that up till 1929 industrial production was expanding more rapidly than agricultural production. From 1929 onwards industrial production decreased. The resulting unemployment created a shortage of money to purchase agricultural products. It is now beginning to be realised that the collapse of agricultural prices from 1930 onwards was due,

not so much to increased production as to decreased consumption. Enfield, in a masterly exposition of the situation in his Presidential Address to the Agricultural Economics Society, comes to the conclusion that "a fall in demand has been at the root of the severe decline in the price of agricultural products. . . . The extensive unemployment in Europe and America, coupled with wage cuts and shorter hours, is the greatest single cause of world depression in agriculture, so much so, that if world unemployment were suddenly to cease as a result of general economic recovery with all that that implies, it might reveal a shortage of supply in many agricultural commodities now over-produced." [2]

The reason for the continued agricultural production at the 1929 level during a time when industrial activity fell by over 30 per cent is, of course, due to the fact that while factories can slow down production at a few days' notice, agriculture cannot suddenly stop producing without disorganisation of farms. It takes two or three years to work into a system of lower production, and the change over involves a loss in capital. A factory can shut down for a year or two and reopen, whereas if all the operations on a farm ceased for a year or two, it would take almost as much as the farm is worth to recondition it again for production at the former level. Hence, though prices continued to fall below the cost of production, farming had to go on and production continue though it was known that markets were glutted with produce which could not be sold at a remunerative price.

#### RESTRICTION OF IMPORTS BY EUROPEAN COUNTRIES.

The world agricultural depression was made worse by the protection policy of the European importing countries. At the end of the war, Europe was suffering from a shortage of food. Compared with the pre-war period the acreage under wheat had contracted by between fifteen and twenty million acres, and there was a corresponding decrease in live-stock, which had been killed off during the war. Tariffs on imports were kept low, and food was imported freely. For the first five or six years after 1919 the imports of some agricultural commodities were greater than before the war. By 1925, however, the scarcity had become less acute, and in that year Germany freed herself from the restrictions imposed by the Peace Treaties which prevented her imposing custom duties. Partly for military reasons, and partly on account of the shortage of money to pay for imports, Germany set herself to increase home production and to limit imports. About the same time Italy embarked upon what has become known as 'The Battle of the Grain'—an attempt to become self-supporting in food. France, Austria, and Czechoslovakia

adopted the same policy. Tariffs were applied, home production increased, and imports decreased.

It has been suggested, and there is certainly some truth in the suggestion, that this agrarian protection policy in Europe was one of the factors in causing the world-wide depression in agriculture. On the other hand, the world depression, with the rapid fall in prices, reacted on these European countries. Canadian wheat fell from 48s. 6d. a quarter in 1929 to 23s. 7d. in 1931. European countries were forced to raise their tariffs still higher, and to apply quotas limiting the amount which could be imported. The duty on wheat in Germany was raised from 2s. 6d. a cwt. in 1929 to 18s. 11d. in 1934; in France from 2s. 11d. to 10s. 1d., and in Italy from 4s. 6d. to 12s. 4d. As a result of these measures, the imports of wheat and wheat flour into European countries (excluding the United Kingdom) have fallen to about half what they were in 1926.

The restrictions were applied not only to wheat but also to meat and dairy products. The imports of beef into European countries (excluding the United Kingdom) fell from 475·2 thousand tons in 1925 to 103·1 in 1933. The figures in the following table give an idea of the extent of reduction of imports of animal products into Germany in the last ten years. It will be seen that the fall which began in 1925 was markedly accentuated from 1929 onwards.

GERMANY'S IMPORTS OF CERTAIN FOODS [2].

	1925.	1927.	1929.	1931.	1933.
Meat . .	160·3	150·9	81·5	2·6	0·6 thousand tons
Butter . .	965	1082	1354	1001	591 thousand quintals
Cheese . .	730	706	643	513	395     ,,     ,,

Figures taken from publications of International Institute of Agriculture.  
Quoted by Enfield.

This policy of restriction of imports naturally led to a rapid rise in internal prices. The price of wheat in Italy, France, and Germany is from two and a half to three times the world price. The same range of disparity between internal and world prices applies to animal products.

#### THE EFFECT OF A EUROPEAN AGRARIAN POLICY ON THIS COUNTRY.

The outflow from the food exporting countries, being cut off from the European market, was largely diverted to this country. The following table shows how our imports of



agricultural products increased during the period when imports in the other European countries were decreasing.

SUPPLIES OF FOOD IN UNITED KINGDOM—(THOUSANDS OF METRIC TONS) [3].

	Average 1924-28			1934		
	Home produced	Imported	Total	Home produced	Imported	Total
To animals (including poultry and rabbit)	1234	1498	2732	1445	1606	3051
Bacon and ham . . .	75	447	522	104	438	542
Butter . . . . .	44	282	326	57	485	542
Cheese . . . . .	42	140	191	75	150	225
Eggs . . . . .	176	156	312	279	170	449
Wheat flour *	711	3348	4059	660	3560	4220

\* Including wheat in terms of flour

It will be seen that in addition to increased imports there was an all-round increase in home production, so that the total amount of food available in this country was increased. This led to a drastic slump in wholesale prices. The fall would have been even more marked had it not been for the fact that owing to the unemployment insurance, old age pensions, and other social measures, the purchasing power of the unemployed and other poor was maintained at a relatively higher level than in other countries. Wages fell on an average from 5 to 6 per cent, but the retail price of food fell by 25 per cent. The ratio of purchasing power to retail prices of food was therefore increased, with a resulting increased consumption of the more expensive foodstuffs. The consumption of meat increased from 134 lb. to 143 lb. per head; of butter from 16 to 25 lb.; of fruit from 91 to 115 lb.; of eggs from 120 to 152 per head. There was a decreased consumption of the cheaper substitutional foodstuffs such as margarine, which fell from 12 lb. to 8 lb. per head. Taken all over, however, the consumption of food increased. The daily calorie intake, which is an indication of total consumption, increased from approximately 3140 to 3250 per head of the population.

But while retail food prices decreased by 25 per cent, wholesale food prices decreased by 34 per cent, and home agricultural products by 25 per cent, so that on an average the farmers' gross income fell by that amount without a commensurate fall in rent, wages, or most other costs of

production. While, therefore, the people of the country were enjoying a cheap food supply, the farmers were faced with bankruptcy. These were the circumstances which called for drastic action to save agriculture. The measures adopted, which are referred to below, must be regarded as more or less emergency measures. In the cases of some products, marketing schemes were applied; in other cases, tariffs. Where the need was worst, as in the case of the wheat growers and beef producers, assistance was given in the form of a subsidy. By these means the ship of agriculture was gradually manoeuvred off the rocks of bankruptcy. No other country has been more successful in dealing with the effects of the economic crisis. By these improvised measures, which took account of all interests, including our export trade, agriculture has been saved, without imposing any hardships on the consumer and without affecting our export trade, on which the prosperity of some of our industries depends. We have gained a breathing space, in which at more leisure we can plan for the future prosperity of agriculture. The measures which have been taken in the last few years, after whatever modifications have been found necessary in the light of experience, can be used as the groundwork, and indeed may form the main structure, of a long term agricultural policy, which, in view of the growing realisation of the importance of food consumption, will need to be in the joint interest of the producer and the consumer. It will be of interest to review these measures briefly.

#### ORIGIN OF MARKETING SCHEMES.

*Co-operative Schemes.*—In pre-war days there were several attempts to form co-operative agricultural societies. The post-war slump in prices gave an impetus to the movement for co-operation in both buying and selling. The Agricultural Organisation Society of England and Wales was established in 1901, and its Scottish counterpart in 1905, with the object of furthering co-operation in the purchase of requisites and the sale of produce. These initiated several schemes, some of which, as for example the Eastern Counties Farmers' Co-operative Society and the North-Eastern Agricultural Co-operative Society, which are still in a flourishing condition, met with a good deal of success. Others, however, failed, owing mainly to the tendency of members to break away from the Society so soon as they thought they could get a temporary advantage by buying or selling on their own initiative. In the case of milk, the drastic fall of prices in 1922 forced farmers to adopt collective bargaining with organised buyers. In this the National Farmers' Union

achieved a very considerable success. It was in the course of these negotiations between the National Farmers' Union and the distributors that the system of paying differential prices for milk for liquid consumption and milk for manufacturing purposes was first introduced, the manufacturing price being based, as it still is, upon the price of imported cheese.

The Glasgow Milk Pool, formed in 1927, is of special interest. At first it achieved considerable success, but later broke down owing to the breaking away of producers. The failure of the Glasgow Milk Pool in 1930 was a strong argument in favour of the first Agricultural Marketing Act referred to below. Voluntary co-operative marketing on the whole met with only moderate success.

*Linlithgow Committee.*—While these experiments in co-operative marketing were running, a systematic study of the problems of marketing was being made. At the end of 1922, the then Minister of Agriculture, Sir Robert Sanders, appointed what has become known as the Linlithgow Committee, "to enquire into the methods and costs of selling and distributing agricultural, horticultural, and dairy produce in Great Britain, and to consider whether, and if so by what means, the disparity between the price received by the producer and that paid by the consumer can be diminished." On this Committee were many distinguished names, including two eminent Scotsmen—the Marquis of Linlithgow, as Chairman, and the late Dr Charles Douglas. The Committee issued four interim reports, and a final report, the former dealing respectively with milk and milk products; fruit and vegetables; meat, poultry, and eggs; and cereals, flour, and bread. The Linlithgow Reports have formed a solid groundwork for all subsequent study of the subject. The reports all showed the wide margin between the prices received by the farmer and the prices paid by the consumer, and emphasised the weakness of the position of the producer in bargaining with the wholesale or retail distributor.

*National Mark Scheme.*—The Report of the Linlithgow Committee led to the establishment within a year or two of a Markets Branch in the Ministry of Agriculture and Fisheries. This Branch made a further detailed survey of marketing conditions. It then devoted its activities to educating and persuading the farmer to adopt improved methods of grading and packing, and the distributor and consumer to recognise the enhanced value of well graded and packed home grown produce. A series of reports on the marketing of various agricultural products was issued, with suggestions for improvements in the method of handling produce, and in addition demonstrational work was carried out among farmers. Meantime similar work was being done by the Department of Agriculture in Scotland. The Agricultural Produce (Grading

and Marketing) Act of 1928 introduced the National Mark, and within two years both Scottish and English National Marks, guaranteeing uniformity of grading and quality, had been established for a wide range of agricultural and horticultural products. Under the National Mark Scheme, home-produced products can be marketed in better and more uniform condition, and therefore are better able to compete with the standardised imported products.

Standardisation of farm produce was an important step towards organised marketing, but standardisation alone was not sufficient to diminish to any extent the disparity between the price received by the producer and that paid by the consumer, which was the problem presented to the Linlithgow Committee. It could not of itself raise the price received by the farmer to a remunerative level. Powers were therefore sought to enable producers of any commodity to combine and control the marketing of their product.

#### THE AGRICULTURAL MARKETING ACTS OF 1931 AND 1933.

In 1931 the Labour Government passed the first Agricultural Marketing Act. Under this Act, provided two-thirds of the producers vote in favour of a marketing scheme, a marketing board elected by the producers can be set up with powers to control the marketing of the products covered by the scheme. The Board is given power to regulate the amount allowed to come on the market, so that supply may be adjusted to 'demand,' or it may fix prices below which produce may not be sold.

When the scheme is adopted all producers within the area covered by it must be registered, and no sale of produce can be made by any producer who is not registered, unless the Board exempts him from registration. The Board decides the terms on which new producers may become registered producers. It collects levies from producers to provide funds for its operations. Compliance with its orders is secured by imposition of monetary penalties, and the scheme gives powers to the officials of the Board to inspect land and working premises to ensure that no contraventions of its orders may be permitted with impunity.

The Act applies to "any product of agriculture or horticulture and any article of food or drink wholly or partly manufactured or derived from any such product, and fleeces and the skins of animals." The definition excludes inedible processed articles such as leather or woollen goods, but it applies to all home-produced foodstuffs as well as to wool and hides.

To enable marketing schemes for any product to be brought

into operation, provision was made for the setting up of Reorganisation Commissions to survey the production, sale, and also the imports of the product, and thereafter to prepare a marketing scheme for the consideration of producers.

In view of the drastic powers over the food supply of the country given to Marketing Boards, it was of the utmost importance to provide safeguards for the many interests involved. The Act provides for the setting up of Consumers' Committees appointed by the Ministers—*i.e.*, the Minister of Agriculture for England and Wales, and the Secretary of State for Scotland. The Consumers' Committees are charged with the duty of considering and reporting on any complaints which may be made to them as to the effect of the schemes on the interests of the consumers. They have, in a general way, a watching brief, from the standpoint of the consumer, on the operation of the schemes. In addition to the Consumers' Committees, the Ministers must also appoint Committees of Investigation which deal with reports of the Consumers' Committees, and also complaints made to the Minister which could not be appropriately referred to a Consumers' Committee. These Committees have no executive powers. They merely report to the Minister. If, however, the Minister is satisfied that the scheme or action of the Board is contrary to the interests of consumers, or the interests of a substantial number of persons affected by the scheme, or is not in the public interest, he may make an order for revoking the scheme. This drastic power, however, is intended to be available only in extreme cases. Before the Minister's order becomes effective, it must be laid before Parliament and approved by both Houses.

The 1931 Act gave full powers to control the marketing of home-produced products. But these powers are of little value if there is an unlimited supply of imported products over the marketing of which the Boards have no control. In 1933, therefore, the National Government passed another Agricultural Marketing Act. Under this Act the Board of Trade was empowered to regulate imports from foreign countries of any product covered by a marketing scheme, provided the Board of Trade was satisfied that such regulation was necessary for the successful working of the scheme.

This extension of control and the regulation of supply of imported foodstuffs brought the whole food supply of the country within the scope of these Marketing Acts. Hence, it became necessary to set up a further committee to keep the Minister informed with regard to the effect of the working of the marketing schemes. The Market Supply Committee was therefore created to review the circumstances affecting the supply of agricultural products in the United Kingdom, to make recommendations as to any steps which should be

taken for regulating supply, to give advice and assistance to the Secretaries of State in connection with their duties under the Act, and to report to them on arrangements made for controlling imports.

This Act also made provision for the introduction of development schemes where two Boards dealing respectively with a primary and a related secondary product are in existence. The Board administering the primary product and the one administering the secondary product may submit, for the approval of the appropriate Minister, a scheme "for organising in connection with the said Marketing Schemes the production of the secondary product."

The 1931 Act gave powers to control sales, but had no powers to control production. The 1933 Act gave further powers to the Boards to control production. Any person producing in contravention of the provision of a development scheme is liable to fine or imprisonment.

#### MARKETING BOARDS.

The first Agricultural Marketing Scheme submitted was a Scottish Raspberry Marketing Scheme. It was rejected, however, at the poll of producers. The first scheme to be brought into operation was the Hops Marketing Scheme, which was submitted to the Minister in March 1932, and came into effect in September of that year. Neither of these schemes was preceded by a reorganisation commission. In April 1932 two commissions were appointed—one on Pigs and Pig Products and the other on Milk. The former, presided over by the Right Hon. Lane Fox, now Lord Bingley, submitted its report in October 1932. In January 1933 the National Farmers' Union, representing producers, got the approval of the Ministers to the Pig Marketing Scheme, which received a favourable poll and came into operation in September 1933. At the same time a Bacon Marketing Scheme was brought into being by the Food Manufacturers' Federation. The Milk Commission, presided over by Sir Edward Grigg, submitted its report in January 1933. An agricultural Marketing Scheme for Milk for Scotland lying south of the Grampians had been submitted by the Scottish Agricultural Organisation Society in June 1932. A corresponding scheme for England and Wales was submitted by the National Farmers' Union in March 1933. Both schemes were voted upon by producers in September, and brought into operation before the end of the same year. Two additional Milk Marketing Schemes, one for Aberdeen and Kincardine in July 1934, and one for the Northern Counties in August 1935, were brought into being. In March 1933 a Potato Marketing Scheme for

Great Britain was submitted by the National Farmers' Unions of Scotland and England, and came into effect in March 1934.

Fat Stock Commissions for England and Wales and for Scotland submitted reports in March 1934, but no corresponding marketing schemes have so far been submitted by producers to the Ministers concerned. An Egg and Poultry Reorganisation Commission for England and one for Scotland were set up, and submitted their reports in January 1935. A Commission for Great Britain was then set up to consider co-operation between the proposed schemes. Their report was submitted in December 1935, and the recommendations of the three Commissions are now under consideration by producers.

It is doubtful whether, under ordinary circumstances, marketing schemes would have received sufficient support from farmers to bring them into being. Owing to the collapse in prices, agriculture was in dire straits. Farmers had been agitating for protection. It was made clear to them, however, that the policy of the Government was supply regulation, and that competition from overseas would be dealt with only by quantitative limitation of imports, but that this would not be applied except in conjunction with the marketing schemes. The farmer, therefore, had no alternative. It is astonishing that these Acts, which involve such revolutionary changes with regard to our food supply and also with regard to our economic structure, were passed with so little discussion. This is due partly to the fact that there was at that time, and indeed still is, a strong movement for economic planning, and partly because, as the schemes are officially submitted by the farmers themselves, or by bodies representing the farmers, it was assumed they represented what the agricultural community regarded as being necessary to restore prosperity to the industry.

The history of the Marketing Boards since their establishment is common knowledge and need not be commented on here. It is too early yet to say what modifications may be found necessary. The one which has perhaps experienced the greatest difficulty is the Milk Board. Under the Milk Act of 1934, some £2,500,000 has already been advanced or contributed from the Treasury to enable it to get over the difficulty of dealing with surplus milk, and to carry out propaganda for increased milk consumption, an essential part of the latter scheme being the selling of milk at reduced prices for school children. In February 1935 another milk Reorganisation Commission was set up to consider the operations of the Milk Marketing Scheme. At the time of writing, the report of this second Commission on Milk has not yet been submitted.

## SUBSIDIES.

Although marketing schemes based on the principle of supply regulation were pushed with great vigour, measures to assist agriculture were not limited to these schemes. The most important subsidy, and the most equitable as between different districts, is that afforded by the derating of agricultural lands and buildings under the Acts of 1923, 1925, and 1928. As an indirect subsidy it is applied to all farms irrespective of what they produce. Derating has relieved farmers of payments which would, in recent years prior to the readjustment of the block grant system, have amounted to £16,000,000 per annum.

Since 1924 financial assistance has been given to the sugar beet industry. Under the British Sugar (Subsidy) Act of 1925 a subsidy has been paid upon sugar and molasses produced from home-grown beet. According to Venn, the total cost, including concurrent excise remissions during the eleven years in which the subsidy has been in existence, has amounted to about £47,000,000. [4] These subsidies were due to come to an end in September 1934. They were, however, continued after that date on an understanding that a Sugar Beet Marketing Scheme would be submitted under the Agricultural Marketing Act. A scheme was in fact submitted by manufacturers in February 1934, and a marketing scheme was submitted by beet growers. In April 1934 an impartial committee, under the Chairmanship of Mr Wilfrid Greene, K.C., was set up to make recommendations as to the future conduct of the industry. Its report was submitted in April 1935. The majority reported against the continuation of a subsidy, on the grounds that sugar production in this country is unlikely to become economically successful. A minority report by Mr Cyril Lloyd, however, recommended that in the interests of agriculture the subsidy should be continued. The Government's proposals in connection with the sugar beet industry are at present before the House of Commons in the Sugar Industry Reorganisation Bill, which provides for the establishment of a Sugar Commission charged with the duty of keeping the industry under review, for the amalgamation of companies manufacturing sugar from home-grown beet into British Sugar Corporation, Ltd., and for the granting of financial assistance to the Corporation.

Under the Wheat Act of May 1932 a subsidy for wheat production is provided, in the form of a deficiency payment, out of a fund derived from a levy on all flour milled from home or imported wheat and on imported flour. The expense of this levy, therefore, does not fall upon the Exchequer. This scheme has worked very smoothly. The



price of bread is so cheap that there has been little or no protest against this tax on flour. The deficiency payment is spread over all wheat grown, so that as acreage increases, the amount of deficiency payment decreases. This sets an elastic limit to the expansion of wheat growing. The total annual payments to wheat growers now amount to about £7,000,000 per annum.

The restriction of the subsidy to wheat, to the exclusion of oats and barley, has given rise to a feeling of dissatisfaction in Scotland. Wheat was early singled out for assistance because the depression in wheat growing had set in long before the general world slump in prices. The price of English wheat fell from 84s. 8d. per quarter in 1920-21 to 38s. per quarter in 1929-30. The subsidies for wheat and sugar beet have brought relative prosperity to the wheat-growing counties of England where the depression in agriculture was worst.

Apart from the fact that the farmers of these counties were on the whole worse off than the average, it was relatively easy to give a subsidy to wheat because it bulked so largely in the minds of many people. Many politicians of that time were of the opinion that if wheat growing were profitable agriculture would automatically become prosperous. It took a long time to get it realised that wheat is less than 5 per cent of agriculture.

At the present time oats is in the position that wheat was in a few years ago. There is no argument which can be used for a subsidy for wheat which could not be used with equal force for a subsidy for oats. It has been suggested that the levy on wheat and flour might be used for a grain subsidy, which would include oats and barley as well as wheat. Another suggestion is that oats might be subsidised by a levy on imported feeding-stuffs on the basis of the levy-subsidy principle.

No marketing schemes were submitted to Ministers as a result of the reports of the Fat Stock Reorganisation Commission submitted in March 1934, and in July of that year the Government announced its long-term marketing policy, which included a levy on imported meat and live-stock, from which a fund would be established to enable 'deficiency' payments to be made to home meat producers, on the lines of the Wheat Act. In view of the agreements with Dominion and foreign governments, however, such an arrangement could only be introduced with the consent of the countries concerned, and the continued depression of fat cattle prices induced the Government to provide, as an emergency measure, financial relief for cattle producers. This took the form of the Cattle Industry (Emergency Provisions) Act, passed in July 1934, which made provision for a subsidy of 5s. per live cwt. or 9s. 4d. dead weight on all fat cattle certified by the appropriate officers of the Cattle Committee (established under the Act) as qualifying for the subsidy. The duration of the subsidy

was limited by the Act to the end of March 1935, but necessary delays in introducing the permanent policy have led to its extension, and it appears certain that it will be continued until it is found possible to bring the long-term policy into effect.

In his Presidential Address to Section M. of the British Association in September 1935, Venn gave a summary table of the financial assistance now afforded annually to farmers in Great Britain under various enactments. [4] The figures, which are given below, exclude any estimate of the financial advantages accruing to farmers from import duties or from the rise in prices of quantitative control of imports.

Wheat deficiency payments (year ended September 1934)	£7,180,000
Sugar beet subsidy (year ended March 1935)	2,820,000
Meat subsidy (year ended September 1935)	3,300,000
Milk grants (year ended March 1935)	1,600,000
Small holdings and allotments	900,000
Afforestation	450,000
Ministry of Agriculture, Scottish Department and Development Commission	2,500,000*
Local Taxation Reliefs	15,000,000
	<b>£33,750,000</b>

THIS figure is an estimate of a multiplicity of annual disbursements made through official bodies and ranging from capital grants for building extensions to the provision of agricultural scholarships.

Against this gain there must be set the additional annual cost to the farmer caused by the re-establishment of the Statutory Wages Boards. Venn estimates this at £10,250,000, leaving a net gain in recent years of about £23,500,000 per annum.

*Tariffs.*—Import duties were among the first measures adopted to assist the United Kingdom farmer in the present depression. Up to the end of the year 1931 import duties were applied to only a limited range of agricultural products, were for purely revenue purposes, and were accompanied by excise duties for the corresponding home products. But under the Horticultural Products (Emergency Customs Duties) Act, 1931, passed in December of that year, the Minister of Agriculture and Fisheries was empowered to impose customs duties on certain descriptions of fresh fruit, vegetables, flowers, and plants. This was due to expire on 11th December 1932, but, in fact, the Orders made under the Act were terminated on the 1st September of that year, the existing duties being replaced by a new tariff under the Import Duties Act of 1932. This Act came into operation on the 1st March 1932, and imposed a 10 per cent *ad valorem* duty on all imports from foreign countries, with the exception of a number of commodities scheduled in a 'free list' (which included wheat,

maize, broken rice, hay and straw, and meat, among other items), and with the exception also of goods already subject to an import duty under any other Act. The Import Duties Act also made provision for the setting up of the Import Duties Advisory Committee, charged with the duty of considering representations and making recommendations to the Treasury for further existing duties, or for the addition of commodities to the free list (but not for the removal of commodities from that list).

The next stage in recent tariff history was the Ottawa Agreements Act, 1932, following the Ottawa Conference of July and August of that year. Under this Act, the United Kingdom Government agreed, in return for a number of tariff concessions by the Dominions, to impose new and additional duties upon certain imports from foreign countries, to maintain the existing 10 per cent *ad valorem* duties upon other commodities, and to continue the free entry of Dominion goods—subject to a reservation in respect of certain dairy products.

Among the new Ottawa Duties was one of 2s. per quarter (480 lb.) on wheat from foreign countries, and one of 10 per cent on flat white maize. Oats and barley from foreign countries had been subject to the 10 per cent duty under the Import Duties Act. But the new duties still left Dominion grain free of duties, and also round yellow maize, such as constitutes the bulk of the imports from the Argentine.

The duty of 10 per cent on oats and oat products had little effect upon imports, which continued to increase, and at the end of August 1933 an Order was issued by the Treasury increasing the rate of duty to 20 per cent, while in January 1934 a further Order amended the duty to a specific one of 3s. per cwt. on oats in grain and 7s. 6d. per cwt. on oatmeal.

#### THE ELGIN COMMITTEE.

Reference must be made to two inquiries which were made independent of Government Departments. The reports of these have already had, and in the future may have still more influence in moulding opinion and in affecting policy. In April 1932 the Scottish National Development Council set up a committee to inquire and report on the state of agriculture in Scotland. It consisted of fifteen members selected on account of their knowledge of the production and marketing of agricultural products. The Earl of Elgin was the Chairman and the Marquess of Linlithgow, Vice-Chairman. All the main agricultural societies and institutions in Scotland were represented, the Highland Society being represented by Mr Alexander Murdoch, Chairman of Directors.

The Honorary Secretaries were Professor Ogilvie, Professor of Economics at Edinburgh University, and Dr Orr, Director of the Rowett Institute. Assistance was obtained from the Department of Agriculture, although it could not be officially represented, and also from the Agricultural Colleges and Research Institutes. This Committee, after a review of each branch of the industry carried out by sub-committees, and consideration of all the measures which had already been taken to assist agriculture, put forward a scheme for the re-organisation of marketing, based on the 1931 and 1933 Acts. [5] It suggested, however, that in regulating supply to demand, 'demand' should be interpreted "not as the amount allowed to be put on the market to maintain a given selling price, but as the amount required to provide for the reasonable needs of every member of the community," and that "the retail price of food should be so low that the poorest can obtain an adequate dietary." It also suggested that in view of the heavy liabilities which the State has assumed in its public health and other social services, "an enquiry would show that the total expenditure of the State on agriculture, on poor relief, and on public health would be lowest under a system whereby the retail price of food would be sufficiently low to enable the poorest members of the community to obtain sufficient of the right kind of food, and whatever assistance was found in these circumstances to be necessary to maintain a National agriculture, should be given in the form of a direct subsidy instead of by a complicated arrangement designed to maintain or raise the price of foodstuffs." The report urged that the marketing schemes should be directed towards improving marketing methods to narrow the margin between wholesale prices which the farmer gets and the retail price which the consumer pays. It was suggested that this could best be done by the establishment and control by the Marketing Boards of collecting and processing centres from which cheap and efficient distribution could be organised. It held that the success of marketing schemes should be judged by the extent to which they improved the efficiency and reduced the cost of processing and distribution. The Elgin Committee thus went back to the original and fundamental problem raised by the Linlithgow Committee—viz., the disparity between the price the farmer gets and the price the consumer pays.

#### THE LEAGUE OF NATIONS COMMITTEE ON HEALTH AND AGRICULTURE.

The Elgin Report appeared at a time when Marketing Boards were being set up with feverish activity. Its recommendations could not have been applied immediately without

causing further confusion. The principles which it enunciated, however, met with general approval, although they conflicted with the supply regulation principle of the 1931 and 1933 Marketing Acts. Since that time opinion has moved in favour of the scheme suggested by the Elgin Committee. At the Assembly of the League of Nations last September, the Right Hon. Stanley Bruce and Lord De La Warr, the Parliamentary Secretary for Agriculture, brought forward a resolution to set up a committee of the League to ascertain by what means increased consumption of health foodstuffs could be brought about to the benefit of Agriculture, Health, and Trade. The resolution was supported enthusiastically by countries which, in the last few years, have imposed the most drastic restrictions on agricultural imports. It was at this meeting that Mr Bruce coined the phrase, "The marriage of Health and Agriculture." The Committee has already presented its first report showing the amount of various foodstuffs which are required for health. [6] If the League of Nations can devise ways and means of bringing about increased consumption up to the standard recommended by the Committee of Experts appointed by the Health Section of the League, there will be a market for a greatly increased production of animal products, fruit, and vegetables. According to the standard set up by that Committee, milk production in this country would need to be doubled and all consumed as liquid milk. It is too early yet to say what effect this new point of view will have upon agricultural policy in the different countries in Europe.

#### LEVY-SUBSIDY SCHEME.

While the marketing schemes based on the principle of regulation of supply and demand inherent in the 1931 and 1933 Marketing Acts were promoted with enthusiasm, and every effort made to make them a success, it was repeatedly stated by the Minister of Agriculture that we were proceeding on the principle of 'trial and error,' and that whatever modifications were found to be necessary would be made. The Minister has repeatedly emphasised that the Government's policy is to secure the maximum supply of foodstuffs at the lowest price combined with a reasonable return to the home producer, and in March 1935 he announced that a subsidy, the proceeds of which would be derived from a levy on imports, would be the basis of future policy in respect of fat stock and meat. This policy, however, could not be brought into being immediately because we are still bound by our bargains on import quotas which arose from the marketing schemes and the trade agreements with other nations. A subsidy is,

however, being paid on fat cattle in anticipation of a levy being made on imported beef so soon as the present trade agreements are ended. The principle of levy subsidy has since gained increasing favour. In his address to the Agricultural Council in December 1935 the Minister said that he considered that the earmarked tariff or the subsidy method was a technique that enabled the country to absorb the enormous available surplus quantities of foodstuffs and at the same time ensure that they did not operate to the detriment of home production. As early as July last year he had foreshadowed its application to dairy products, and a proposal to increase the permitted imports of bacon and hams, subject to an earmarked tariff for the benefit of the home industry, was announced in June 1935 by the Minister. The Great Britain Reorganisation Commission for Eggs and Poultry, in its report in December 1935, recommended an increase in import duties on eggs, and that some part of the proceeds of the tariff on eggs and egg products shall be set aside for the assistance of the home industry.

#### THE PRESENT POSITION OF AGRICULTURE.

The industry has been assisted by what has been already done. On the whole the direct subsidies and tariffs have been of more assistance than the marketing schemes. But much more is needed. Since the middle of the nineteenth century, except for the short period of the war when there was a food scarcity, British agriculture has been fighting against fierce competition in our own markets from countries where the cost of production was reduced by mechanisation, and where marketing has been for long organised through the bottle-neck system of exports which cheapened wholesale distribution and enabled standardised products to be put on our markets. The industry managed to survive by swinging over more and more to the production of animal products, fruit, and vegetables which command a higher price when marketed fresh. But in spite of the high degree of efficiency which competition developed, the great majority of farmers did not make sufficient profits to enable them to keep their land in first-class condition and modernise buildings and equipment. In most cases landlords were no better off. The net yield from estates was insufficient to enable them to carry out improvements, and indeed there was little inducement to sink more capital into an industry which had no hope of doing more than survive on the verge of bankruptcy. Not only did the industry fail to give an adequate return on the capital invested, but it was unable to pay reasonable wages to farm labourers.

The extent to which agriculture has been living off its own capital, by failing to make good depreciation in buildings and keeping plant and equipment up to date, is not fully realised. British agriculture sadly needs new capital to recondition it and re-equip it for efficient production. What British agriculture needs is more money. The question at issue is—where is the money to come from? A scheme which takes money from one farmer and gives it to another is of no value to the industry as a whole. Nor can the money be obtained from a rise in the retail price of food, so long as such a large proportion of the population are living at an income level below that which enables them to have a diet fully adequate for health according to modern standards.

The subsidy may come from a pool provided by import levies; or, if that be insufficient, from the National Treasury, in which case the burden of maintaining agriculture is borne by the members of the community in proportion to their ability to pay, and not in proportion to the amount of food they eat, which would bear too heavily on the poorer section of the community, especially those with large families. Further, the cost of subsidised consumption in the interests of health should be regarded as expenditure on public health and not on agriculture.

### THE FUTURE.

In the early days of the world economic depression most people thought that the depression was a temporary one, which should be followed by recovery with increased prosperity, as had happened in the case of depressions in pre-war days. In the present case, however, there are certain new intractable factors; one of them is the spirit of nationalism which has led the main countries of the world to attempt to be, as far as possible, self-supporting. Even the British Dominions have for years been building up their industries behind a tariff wall. It must be realised that with greatly increased powers of producing commodities, countries can become to a greater and greater extent self-supporting, which, of course, may entail a slowing down in the rise of the standard of living.

This has a direct bearing on agricultural economic problems. European countries, which have adopted a policy of drastic agrarian protection, have been extending production in the last ten years, and are becoming more and more self-sufficient. There is no indication that in the near future they will depart from this policy. Under existing circumstances, therefore, we cannot depend upon any great part of the present flow of exports being redirected to European countries.

Some hopes were based on the assumption that exporting

countries were putting foodstuffs on our market at a price below the cost of production, and sooner or later these exports must cease. The depression of agriculture in these countries, however, has had the effect of lowering the cost of production. Mortgages and other fixed charges have been reduced, and with the fall in prices every effort has been made to cheapen the cost of production by increased efficiency. Hence, if our markets were left unprotected, the competition from imports would be even greater than in the pre-crisis period.

The situation is complicated by still another factor. In the nineteenth century, although there were short periods of depression due to the production of more than could be sold at an economic price, populations of different countries were growing rapidly and the market was steadily extending. Thus, for example, the population of Great Britain increased from less than 21 million in 1851 to nearly 45 million in 1931. The rate of growth of the population of the civilised countries has begun to slow down, and it is estimated that in the next twenty years populations will gradually become less than they are to-day. It is estimated that the population of Great Britain in 1950 will have begun to decline, hence there is no hope of an expanding population absorbing increased production.

If these assumptions be correct, and of course it must be kept in view that they are merely assumptions, then it follows that if this country is to maintain a flourishing agriculture it must receive some form of protection, or some form of subsidy. In this it is no different from the agriculture of any other civilised country. Further, if production is to increase, then the branches of agriculture which expand must be those which yield products the consumption of which will be increased with the rise of the standard of living. These are the more expensive foodstuffs, animal products, fruit, and vegetables. Fortunately these constitute 80 per cent of Scotland's output. Recent investigations show that there is room for greatly increased consumption of these, and especially of milk.

The Elgin Committee, which investigated the agriculture problem from the national point of view, emphasised the need for an increased consumption of those products, and the League of Nations Committee, which was appointed to consider agricultural production from the point of health requirements, is almost certain to recommend increased production and increased consumption of those products. In view of this consideration, it is probable that the policy with regard to agriculture may come to be based more and more on subsidised consumption as well as subsidised production, and that the money required will be raised, as far as possible, from levies on imports.



Recently there has been a good deal of interest in political circles on the position of the national food supply in the event of war. Increased home production is now being urged as an important part of the general defence scheme. It is probable that the fear of food shortage in war may have an influence in promoting a policy for the expansion of agriculture.

In conclusion, attention may be called to the valuable services rendered directly to agriculture and indirectly to the whole nation by those leaders of the industry who were pioneers for promoting schemes for the better organisation of agriculture, and also by those who in the last few years have served on Government Committees and Commissions. Due mainly to the ability and driving force of Mr Walter Elliot, the present Minister of Agriculture, all this work is bearing fruit. Agriculture has now a standing which it has not had for many years. The nation is beginning to realise that the apparently conflicting interests of producers and consumers can be reconciled in a policy providing for increased consumption and increased production, and that a developing prosperous agriculture is a sound basis for an expanding internal trade. We seem to be moving towards a permanent policy which will be on a broad basis in the interests not only of farmers, but of the whole nation.

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## GLEANINGS FROM SCOTTISH AGRICULTURAL LITERATURE.

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MODERN life and business is to-day much more hurried than it was, say, a hundred years ago, such a condition being, it would appear, a necessary sequel to what is commonly regarded as progress. Hurried thought and action are inimical to that quiet and orderly contemplation and philosophic reasoning which was so characteristic of the older writers, to whose works it is both pleasing and enlightening to refer. Many of us are too apt to think that the present generation has a degree of enlightenment which was denied to our forefathers, but a study of the works of some of the older writers on agriculture gives no justification for such a belief.

Many of these writers, by close observation, sound reasoning, and correct deduction, did much to foster and promote an interest in and knowledge of the industry of agriculture.

The purpose of this article is to bring to the notice of present day readers some facts relating to agriculture which lie scattered in some of the older books on the subject, the gathering together of which may, it is hoped, prove of some interest. The writer makes no claim to originality, but acts merely as an indifferent gleaner in that vast field of agricultural literature.

### IMPORTANCE OF AGRICULTURE.

At functions at which agriculturists meet together reference is most frequently made to the importance of the industry, just as it was over a century ago. A modern development has been the keen interest evinced by politicians in the same theme.

Dr Samuel Johnson thus refers to agriculture as "the great art which every Government ought to protect, every proprietor of land to practise, and every inquirer into Nature to improve." [1]

Cato in his 'Res Rustica' states that: "When our Fathers would give the character of a good man, they'd say He is a skillful Husbandman. He is an excellent improver of his grounds. These epithets were the most advantageous they could bestow, and who received them was esteemed to have the highest praise given him any man could attain to. . . .

What purchase the Husbandman makes is always honest, and therefor lasting, envied by none, for whosoever employs himself in this innocent life never thinks ill of his neighbours."

It was Virgil's first wish to be a good philosopher, his second to be a good Husbandman, for unless he had been a philosopher he could not have been a good Husbandman.

In pointing out the advantages which the farmer enjoys, Lord Kames (1815) expresses the view that "the hopes and fears that attend agriculture keep the mind always awake and in an enlivening degree of agitation. Hope never approaches certainty so near as to produce security, nor is fear ever so great as to create deep anxiety and distress." [2] It is probable that many farmers to-day would not subscribe to such a view in regard to the tonic effect of mental agitation, which has had an effect more depressing than enlivening.

Robert Brown (1811) urges "that agriculture claims a pre-eminence above manufactures and commerce, from its seniority and superior usefulness, and to use an expression of the celebrated Sully, may be regarded as one of the breasts from which the State derives its support and nourishment." [3]

#### OBSTACLES TO IMPROVEMENT.

Many of the older writers affirm that one of the great obstacles to improvements in agriculture was the slavish adherence of many farmers to customs with which they had been long acquainted, and their suspicion of and unwillingness to try new methods.

In the introduction to an *Essay on Agriculture in Scotland* (1729) which a writer addressed to "The Most Noble Lords and Honourable Gentlemen of the Scots Nation in the British Parliament Assembled," he anticipated the objections that might be lodged regarding his suggestions for new methods:—

"Here is an anonymous saucy fellow who writ a piece and pretends improvements, but in it he squints at your Superiorities. We advise your Lordships you knock this plausible pamphlet in the head and not allow it a motion in Parliament." The writer goes on to say, "Some cavillers will jeeringly and, as they fancy, wittily, ask: Where have you the example of a country's being universally planted with fruit trees, and imposing on everyone to sow such a portion of his fallow with Lint and Hemp seed. It is a Maggot 'tis new." But he argues, "If a thing's being new is conclusion enough to prove it ridiculous and not to be gone into, every means, the most valuable we enjoy of comfortable living in this World were such Maggots, they were all new one time or other. And I fancy if the urgers of such objections had lived in the age the Lady Ceres did, she would have run a greater risque

of her life than she did among the barbarous giants of Sicily, some of whom threatened to kill her because she ordered the clearing of the ground, she believed to be proper for corn, of Oaks, Beech, and Chestnuts," the fruits of which constituted their food. The same writer, in the course of his Essay, makes the following statement which embodies a fundamental truth as true to-day as when it was written over 200 years ago: "I who have a mighty preference and value for experience cannot hinder myself from believing that many things are called experience which indeed is nothing but an old custom, and should not be called experience until by proof he has seen the thing he has experience of succeed better than another that is proposed to him after trying both." [4]

A contributor to 'The Scots Farmer,' writing in 1774, expresses a very similar view:—

"As custom stamps a credit upon such practices as are wise and useful, it stamps an equal credit upon such as are less so, such as compared with the former are absurd and useless. Many practices in farming that were perhaps judicious when they were first introduced ought now to be given up for others more judicious and profitable, and more adapted to the present improved state of the country. Yet many who follow these practices are unwilling to give them up. This looks like acknowledging themselves to be in the wrong in their former conduct: and why will you be so reluctant to make such an acknowledgment? It is only saying that you are wiser to-day than you were yesterday." [5]

In a view of the agriculture of the County of Cromarty in 1795, it is stated that: "As already observed, whilst in general the people seem to consider it as sinful and sacrilegious to deviate from the practice of their ancestors, little improvement can be expected."

In another passage it is pointed out "that there are obstacles to improvement, and these not a few, is but too true. The chief and grand bar to or obstruction to the efforts of our farmers is their general poverty, joined to which is their extreme aversion to any innovation or encroachment upon their ancient usages. These, together with the seeming lukewarmness and indifference hitherto observed in bringing forward any plans upon a public spirited principle so as to meet the evils complained of and unitedly as well as individually to attempt reforming them, are the great obstacles to agricultural improvements in the Northern Highlands of Scotland."

Enough has been said to show that in the view of many writers the spirit of improvement was, in part at least, hindered by the unwillingness of agriculturists to adopt new methods. That such views were not unanimous was well illustrated by

the writings of Dr Anderson who, in his 'Description of the Agriculture of Aberdeenshire' (1794), takes up an entirely different standpoint from that of the writers previously quoted :—

"The reader will perceive that, however slow the progress of improvements may be among the tenantry in Aberdeenshire, it is not to be attributed to the ignorance or obstinacy of the people nor to the bigoted prejudices in favour of old customs, but that it must be ascribed to the operation of other causes, seeing that the people discover a proneness to depart from old practices to such a degree as to have adopted contrivances to enable them to profit by these new practices that no speculative reasoner could have devised for them. Indeed I know of no bigotry so great as that of those who, in spite of the instances that must strike their eyes every day, of new modes of practice being freely adopted in every part of Scotland, at least as soon as circumstances will permit of them, still persisting to exclaim against the obstinacy of country people and their attachment to old customs. I should think that a man would be ashamed still to harp on this theme. Whither do those who declaim without knowledge of the subject in which they speak, or those who remain unmoved by these declamations, best deserve the character of being obstinately attached to particular opinions."

Having now enumerated some of the views as to the obstacles to improvements in agriculture mentioned by the earlier writers, it may be of interest to follow them in their arguments as to how these obstacles might be surmounted, and in this connection readers will, I think, be much impressed by the fact that in many directions such views coincide very closely with the views being put forward to-day.

#### HOW IMPROVEMENTS MIGHT BE EFFECTED.

In the resolution anent the formation of the Society of Improvers in Scotland (1723), it is stated that "the improvement of ground is neglected partly through want of skill in those who make profession thereof and partly through the want of encouragement for making proper experiments of the several improvements that the different soils in this country are capable of." [6]

In a book on Experiments published in 1779 the writer observes : "The utility of Experimenting must be obvious to everyone—and must be peculiarly useful to the Novitiate Agriculturist." He states that observing the results of experiments "is very pleasing and is receiving in the handwriting of Nature an answer to a petition offered up at his throne." [7]

(a) *Experimental Farms.*

In a general view of the Hebrides (1794) the establishment of Farms for Experiments is thus referred to :—

“Let every landholder in the Hebrides set aside one farm of his estate, of moderate extent, for the purpose of exhibiting upon it the most improved practice of agriculture and of the management of animal stock. Every Hebridean gentleman who resides on his estates for the whole or the greater part of the year ought himself to superintend and to direct the labours of this farm for experiments. The returns in produce and profit from this farm must not be the first objects of its cultivation. The grand end must be to exhibit such modes of husbandry as the landlord wishes his tenants to imitate, to make here the first trials of new grasses, new breeds of black cattle, new manures, new instruments, &c. All the experiments must be judiciously chosen and performed with the utmost care, otherwise their miscarriage will prejudice those against them whose practice they are intended to improve. Although direct profit be not the thing principally in view, yet must they be performed with all possible frugality, and rendered as highly and as plainly profitable as may be, for these more than any other considerations will recommend them to a general reception. But the true returns from this farm for experiments will be obtained in the gradual improvement of industry and the gradual increase of produce, population, and capital over the proprietor’s whole estate.” [8]

This wholly admirable statement of the case 140 years ago was followed up by Sir John Sinclair who, in 1815, wrote : “The art of agriculture can never be brought to the highest degree of perfection or established on national or unerring principles unless by means of experiments accurately tried and persevered in for some time. The ardent enquirer has too long been obliged to rely on vague opinions and assertions which have not been warranted by sufficient authority ; it is full time, therefore, by the establishment of experimental farms under the sanction and at the expense of government to bring the art to as great perfection as possible by ascertaining the principles on which it ought to be conducted. . . . In order to render experimental farms generally useful, they ought to be open to the inspection of the public : the account of each experiment ought to be regularly published, and every new practice ought to be examined with the utmost precision, and every trial repeated for confirmation. . . . The object of an experimental farm should be to ascertain facts and publish them, and as much credit would be acquired by an intelligent conductor of an experimental farm for his exertions in detecting errors as in establishing facts likely to be useful.”

(b) *Agricultural Instruction.*

That the advantages to be derived from a training in the Principles of Agriculture were appreciated over 200 years ago is recorded by numerous writers.

A writer in 1729 suggests :—

“If a College of Agriculture was established of practice Agricules and not speculative philosophic ones (such as Theophrastus, a Greek philosopher, of whom Varro says: He was a very good philosopher, but a very chargeable Husbandman, his experiments would cost more than would pay the charges when practised), but such as taught the difference of Soils, Seasons, Grains, Cattles which for fattening and which for the pail, rather than from the perusal of the best authors ever treated on that subject. I affirm such a College would prove of more real solid use to the Island to have it established in some if not all of our Universities—than many of the other sciences. And how much soever I shall be laughed at, I cannot hinder myself from being of the opinion that if Professors would every year emit a thesis on that Science, and hear problems of it proposed and answered . . . is not of more intrinsic value to the commonwealth than the speculative problems of the established learned schools. It is of more use to the farmer, to me, and to everyone else to know how we may add to the fertility of our or their grounds, than to trouble our heads whether the Sun once in 24 hours runs round about us, or we in that time run round about the Sun. . . . I would have the Elements of Agriculture taught to all the youth of the public or private schools in Scotland, Noblemen and Gentlemen’s sons especially. It is a knowledge that will not burden them.” [4]

The Society of Improvers (1743) refers to agricultural workers who “work more like Tools or Machines than men of reason going on blindly as led by custom, in the often unaccountable ways of their forefathers. Their proceeding on no principles or if upon any, upon wrong ones, makes it necessary that it should be taught in a College way as other sciences are. . . . The Crown names Professors and gives them salaries. Which of them can be more useful to the public than a Professor of Agriculture might be or a general inspector of Improvements who should be obliged to report annually on the husbandry of each county, that errors might be known and rectified? By this means every man could have a convenient opportunity of getting his advice. . . . The business of such a Professor should be not to read pompous and superficial lectures, but surely a practical farmer should be chosen, who could teach Rules established upon rational experiments tried in our own country; one who has given testimonies

that he has studied and does understand the Principles of Agriculture." [6]

Lord Kames (1815) points out that : "Agriculture is carried on everywhere without a school, and for that reason is commonly thought to require no schooling. Can a British Minister embrace any measure more patriotic than to encourage agriculture and its professors ? " He urges that "the present time is in Scotland the happiest for the establishment of a public director of Agriculture." [2]

"Columello and others have complained and wondered that all other Arts and Sciences, even such vanities as Dancing and Attiring, have public schools and masters, and yet we should have no Professors of so pleasant, so virtuous, so profitable, so honourable and so necessary an Art as Agriculture." [6]

### (c) *Protection for Agriculture.*

The question of protective duties on imported agricultural produce has for many years been an acute political issue which has only recently been settled. Demands are constantly being made by producers that the duties which have been imposed are inadequate, and do not offer that measure of protection which it is argued the industry deserves and requires. The writer has no intention of discussing the merits of such a demand, but it is of considerable interest to note that the very same issue was being considered centuries ago.

Cato stated that "it is better that their own country should supply their Mercats even for their luxury as well as necessities, than fetch them at dear rates and send away their money to other countries." [4]

At a later date (1814) Sir John Sinclair suggests as a means of encouragement for the advancement of agriculture that a wise Government should "give preference to domestic agricultural productions in the home market."

"To permit the industry of every foreign nation in the Universe at all times and without any just limits to enter into competition with our own domestic productions is a degree of infatuation which can only arise from the wildness of theoretical speculation or the selfishness of commercial enterprise. The equitable principle, therefore, is to impose a prohibiting duty on all foreign agricultural productions until their price be at least as high as that at which they can be raised in Britain in seasons of moderate fertility, and gradually to diminish that duty as prices rise, but still giving a decided preference to the produce of the agriculture of the United Kingdom." [9]

Readers will, I think, be struck by the wonderful pre-vision embodied in the foregoing statement.



As a means of assisting Scottish agriculture the Society of Improvers (1723) adopted the following resolutions :—

- (a) "As examples to others to buy no foreign linnen and propagate the wearing of home-made stamped linnen.

"The consequence was that at public assemblies of persons of the greatest distinction, the whole company appeared dressed in Linnen of our own manufacture, which examples have had a general influence."

- (b) "Against drinking of foreign spirits, and thereby the distilling of our own grain might be encouraged, and the great sums annually sent to France for Brandy might be kept at home." [6]

That the farmers of Scotland were concerned about the menace from the imports of foreign oats, just as they are to-day, would appear from a reference made by Sir John Sinclair (1795): "A revisal of the corn system at least in so far as respects the exportation or importation of oats seems to be necessary, and I have no hesitation to assert that if the price of oats on importation were raised to 18s. per quarter, that the district under review (the Northern Counties of Scotland) alone would supply the London market with all it may demand of that article from foreign states. At present the importation price is so low that there is no encouragement to grow that species of corn, and still less to send it to the London market where it is not likely to enter into a fair competition with grain of foreign growth." [10]

A somewhat similar view is expressed by David Young, Perth (1785):—

"It may be proper to observe that although at times it is cheaper to import grain from abroad than to purchase it at home at an advanced price, yet importation ought never to be encouraged except in cases of great necessity." He states that the grain imported from abroad "is sometimes half rotten and is not fit for the food of men or beasts, and when mixed with other meal often occasions epidemical diseases among mankind and produces distempers which they are not immediately sensible of. . . . There were oats imported from the Baltic in 1782 into some corners of Scotland which had a small seed in them, and when made into meal had the same effect as opium. Even the best grain imported is not nearly equal to what our own produce is, especially oats and barley, when made into meal." [11]

#### (d) *The Formation of Agricultural Societies.*

Writing in 1814, Sir John Sinclair advocates the formation of Agricultural Societies as a means of assisting the industry to overcome the obstacles which beset it, and enumerates

some of the advantages which may be expected to result from the formation of such Societies.

- (a) "When landlords engage in such Associations and take a concern in the general improvement of the country, it gives a powerful stimulus to the zeal and activity of the farmers."
- (b) "When landlords and tenants meet together . . . and compare over a social bowl their exploits in farming . . . it excites a useful spirit of emulation."
- (c) "There are many difficulties which would startle the most powerful individual which vanish before the combined efforts of a numerous Association."
- (d) "The proceedings of a respectable Association have a great effect in liberalizing the minds of men and in exciting all the members to reflection and exertion in the cause of Improvement."

(e) *Premiums.*

Many of the older writers were of the opinion that the offering of premiums would be of material assistance in promoting improvements in agriculture.

Mr Bell, writing in 1802, suggests that an annual grant of £2,500,000 should be given by the Government for the development of agriculture, by means of loans free of interest for a period of ten years, for the reclamation of land and other improvements. He suggests that of the above-mentioned sum £500,000 should be devoted to the purpose of offering premiums in each county for the best and largest crops of Turnips, Potatoes, and Cereals grown on the most extensive area of land, and for the largest number of Horses, Cattle, and Sheep raised by individual competitors. In the classes both for crops and stock he suggests £200-£300 for First, £100 for Second, and £50 for Third. [12]

Another form of premium is suggested by Sir John Sinclair (1795):—

"It is believed that granting certain premiums such as a gown or cloak to the woman who delivered the greatest quantity of the best spun yarn in each Parish, that of a coat of a particular colour and a hat or bonnet adorned with ribbons to the man who raised the greatest quantity of flax, the same of another colour with a hat or bonnet differently adorned to the man who improved the greatest extent of waste ground with several other premiums needless to mention at present, might, when those who gained such premiums appearing thus distinguished at church or market, be the means of creating great emulation and of producing powerful exertions in these different branches of the industry." [10]

(1) *Enclosing.*

From about 1700 agricultural improvement in Scotland became much more general. Among the measures most strongly advocated for the advancement of the industry and the amelioration of the conditions of the cultivators was that of enclosing. Up to that period fencing or enclosing of land had not been adopted, and under such conditions the growing of crops and their protection was a matter of the greatest difficulty. In this connection a writer in 1729 makes the following plea:—

“I don’t see of all men why the clergy should not be the quickest and most earnest to begin enclosing, for sure when the weather is fair their little Manse houses are not so fit for their studies as those delightful Inclosures under a hedge are. There they don’t hear nor are disturbed nor diverted by children crying, the Mistress and servants speaking loud about their little domestic affairs, from which noise no room in his house is remote enough. Besides, these Gentlemen, many of them have their heads turned to the study and virtue of vegetables.” [4]

The writer of the foregoing was stating in prose the very same theme so admirably embodied in a poem written at a much later date:—

“The kiss of the sun for pardon.  
The song of the birds for mirth.  
One is nearer God’s heart in a garden  
Than anywhere else on earth.”

## A CURE FOR GOUT.

To those unfortunate individuals who suffer from that most painful and depressing ailment, gout, and for whom medical men prescribe strict abstinence from alcoholic beverages, the following suggests a form of treatment to which many might not be averse.

In the Parish of Tillicoultry in 1758 a collier named William Hunter was cured of an inveterate rheumatism or gout by drinking freely of new ale full of barm or yeast. The man had been confined to bed for eighteen months, having almost entirely lost the use of his limbs. On the first Monday of the New Year some friends came to make merry with him, and although he could not rise yet he took his share of the ale as it passed round, and in the end became very intoxicated. The consequence was that he had the use of his limbs the next morning, and was able to walk about. He lived more than twenty years after this and never had the smallest return of his old complaint. [13]

## WHERE MARRIAGE IS POPULAR.

In the new Statistical Account of the Orkney Islands (1842) a singular and perhaps unique condition of affairs is recorded in connection with the parish of Cross and Burness, of which the Report states:—

“There is not a single person at the age of 50 who has not felt himself able or at least thought he was so, to support a wife and family, all who have reached that age being married . . . out of the whole number 3 are widowers and these very old men, while there are but 5 females who may be said to be without hope of marriage.”

Population	{	Males . . . . .	247	} -- 522
		Females . . . . .	275	
Widowers . . . . .			3	
Unmarried men over 50 . . . . .			0	
Unmarried women over 45 . . . . .			5	

## DAIRYING IN SCOTLAND.

Old records relating to cheese-making in Scotland are neither numerous nor extensive, and in this respect are decidedly more deficient than those to be found in England. One fact emerges pretty clearly from the Old Statistical Account (1794), and that is, that the production of butter and cheese for sale was an integral part of the rural economy of a large number of parishes in Scotland in which that production is to-day insignificant. For this change there may be several reasons. One reason undoubtedly is that transport facilities have improved to such an extent as to make possible the conveyance of raw liquid milk from areas which were formerly isolated, such milk finding a market as liquid milk or for conversion into some dairy product at a central factory. Another reason is the altered tastes of consumers, who show a preference for a standardised product of uniform quality and appearance. This preference on the part of the consuming public has been carefully studied and catered for by Empire and foreign countries. The variable quality which is, unfortunately, so common a feature of home-made produce does not recommend it to a general acceptance. This is an age of Records, and in such an age the dairy cow is expected to play her part. Dairy breed societies vie with each other in claiming that the particular breeds which they severally represent have merits denied to others, while research in genetics, nutrition, and other abstruse sciences, which are frequently enshrouded in scientific terms quite beyond the

ken of the individual of average education and intelligence, aims at evolving a super-cow with a phenomenal milk yield. From such, may I say, not too healthy competition, let us look back to rational conditions obtaining some 100 years ago. What do we find? No one, two, or three thousand gallon cows certainly, but a surprisingly good yield produced by cows of different breeds kept under natural conditions.

Dr Anderson (1794) records the fact that Mr Farquharson of Invercauld (Aberdeenshire) in 1748 crossed Highland cows with a bull of the Fifeshire breed, "which made the cows larger, but the milk retained its original richness. In the best season, and being milked three times a day, a full grown cow gives between 8 and 9 pints (Scots), about  $4\frac{1}{2}$  gallons, and from the nearest calculation I can make I find that 8 (Scots) pints of milk produces better than 1 pint of cream, and that 1 pint of cream yields rather more than 1 lb. 10 oz. of butter." [14]

This would give a butter ratio of 24.6 to 1, which at a time when no mechanical separators were in use must be regarded as highly satisfactory. In passing, the writer of the present article may mention that, having had occasion to test the milk of a number of different breeds of cattle for butter-fat, including the Channel Island breeds, he has never found any breed to equal that of the Highland in regard to the butter-fat percentage in the milk.

Sir John Sinclair (1815) gives the average yield per cow in dairying districts as 600 lb. of cheese, which would represent roughly 600 gallons of milk.

Various reporters in the Statistical Account of Scotland (1794) record that a common yield is five gallons per day, and in several instances up to eight and nine gallons, but W. Aiton (1811) hardly credits this. "I have heard of 16-18 pints (Scots) being taken from a cow every day, but I have never seen so much, and I suspect there must have been some froth either in the milk or in the story." [15]

As mentioned previously, the manufacture of cheese and the proceeds derived from its sale was an important and valuable source of income.

One hundred and fifty years ago Ayrshire was the most important cheese-making county in Scotland, just as it is one of the most important to-day. Till about the end of the seventeenth century, the cheese was commonly made from skimmed milk, but from then onwards the making of whole-milk cheese was fairly generally adopted.

The story is that one Barbara Gilmour went from the parish of Dunlop to Ireland to escape religious persecution, and that on her return to her native parish she introduced the method of making cheese from whole milk, a method she had learnt in Ireland. This whole-milk cheese became known as Dunlop,

and secured a wide and favourable reception. It would seem that there is a basis of truth in the story, in so far as the Irish origin of whole-milk cheese is concerned, for in a reference (in the Statistical Account, 1794) to the parish of Kilwinning, it is stated that, in 1742, "skim-milk cheese was the only kind they knew how to make. The little sweet-milk cheese which was then used was imported from Ireland." W. Aiton (1811) casts doubt on the authenticity of the story relating to the Irish origin of the Dunlop method of cheese-making. "Whenever a plain, simple, and easy mode of accounting for anything can be seen, I never listen to those that are of a different complexion. Cunningham cheese from the most ancient times was the subject of boast," embodied in the verse :—

" Kyle for a Man ;  
 Carrick for a coo ;  
 Cunningham for butter and cheese  
 And Galloway for 'oo,"

" which was much more ancient than 1688, and before Barbara Gilnour ever existed. I see no need to send a wise wife to Ireland (where probably no such thing was then known) to import the secret." [15]

Whatever the exact truth may be as to the origin of Dunlop cheese, there is ample evidence to show that the farmers in the parish of Dunlop devoted particular attention to the dairy. Colonel Fullerton, in describing the agriculture of the County of Ayr (1793), thus refers to the matter :—

" In Cunningham a breed of cattle has for more than a century been established, remarkable for the quantity and quality of their milk in proportion to their size. They have long been denominated the Dunlop breed, from the parish where the breed was first brought to perfection, and where there still continues a greater attention to cows and dairies than in any other part of Scotland." [16]

Even at a later date it would appear that the parish of Dunlop might be regarded as the centre of the cheese market for the county, for in the account of the parish in 1836 it is recorded that "besides the cheese produced in the parish, a large proportion of what is manufactured in other parts of the country passes through it on its way to the consumer, and 14 persons follow the business of cheese dealers or cheese cadgers, as they are commonly called, purchasing from the farmers and selling in Glasgow, Paisley, &c."

Everyone who has the slightest acquaintance with cheese-making recognises the importance of maintaining the correct temperature at every stage of the operation. Appreciation of this fact is not new, and was equally well known 120 years ago. W. Aiton (1811), referred to previously, puts the matter

thus : "Important as the temperature of the milk is, it is still left to be guessed at. The only standard for ascertaining it is the finger's end of the dairymaid, which is a mode of judging that is extremely vague and uncertain. If her hand has been taken from among warm water the milk will appear to be much colder than it would be if her hand had been immediately before among that which was cold, and she pays no attention whatsoever to the state of the weather. Every chemical operation requires to be executed with the most exact attention to temperature. That circumstance is as important in the dairy as in any other art, yet the dairymaid's fingers are made to serve as a thermometer, both for judging of the state of the weather and the temperature of the milk."

Before leaving the subject of dairying it is of interest to glance for a moment at the condition of the industry at the other end of Scotland.

Aberdeenshire has never been a dairy county in the true sense of the term, but milk production is now, and for long has been, an important branch of farming in certain parishes, the primary purpose being to supply the demands of consumers in Aberdeen with liquid milk. One of the parishes in which special attention is given to dairying is that of Udney, and it would seem that this is no new development. Writing in 1794, Dr Anderson states that "the Parish of Udney has long taken the lead in the general management of the dairy, and the butter made there is esteemed the best in the county. Nor have they any advantage for the management of the dairy above every other part of the county, yet it so happens from the superior cleanliness of the women, and their peculiar attachment to this department, they make in general four times as much money from the same number of cows as the women in other districts. A wife, therefore, from the parish of Udney is a kind of fortune to a man in another district, and she frequently proves the means of giving to him a kind of independence he never otherwise could have enjoyed. From the profits they derive from their cows they are also at more pains to feed them well." [14]

#### POULTRY.

Of recent years much attention has been given to the poultry industry, the development of which on any really large scale has been a feature of the post-war period. Advice has been freely offered to farmers, crofters, and small-holders to adopt poultry-keeping as a remunerative side-line. Such advice has to a considerable extent been taken and acted on, but, as in the case of much that has been written earlier in this article, such advice does not constitute any new discovery.

In 'A History of the Hebrides' (1812) there appears the following :—

"As great things are all composed of small, the smallest matters are not to be neglected by the rural economist. The success of a farmer depends much on his attention to little articles, and this attention he may exert without being either penurious or churlish. It is his business to turn everything to the best account, even the smallest articles on the farm. Among these the management of poultry may very well deserve his notice. It may be a matter of little or no profit for a considerable farmer to raise poultry for sale, but it is proper that a certain quantity of poultry should be maintained." [17]

It would appear that in certain areas the poultry population was considerable. Sir John Sinclair writing in 1812 states :—

"I was often astonished at the incredible number of eggs shipped at Berwick for the London market, amounting in value to several thousand pounds per annum, but the number of fowls kept by the farm servants in the neighbouring counties fully explains it. The country abounds in travelling hawkers who collect the eggs at from 6d. to 1s. per dozen, sometimes as high as 1s. 8d., and about Christmas even 2s. They also purchase any hens or chickens that are not sold at the weekly markets in the neighbourhood." [18]

The prices quoted above are considerably higher than those referred to by the reporters in the Statistical Account (1794) some twenty years before, when the average prices for eggs ranged from 4d. to 8d. per dozen.

To Aberdeenshire belongs the credit of having to-day a larger number of poultry than is to be found in any other Scottish county. From old records it would seem that poultry-keeping has for long been regarded as of considerable importance.

Skene Keith, in his 'Agriculture of Aberdeenshire' (1811), states that the number of poultry in the county was very great, and that "the constant demand for eggs, not only for Aberdeen but for the London market has raised the price and increased the real value of poultry." [19]

As showing the increase in the value of eggs, it is stated that whereas in 1778 eggs could be bought at 1d. to 1½d per dozen, the price in 1811 had risen to 6d., 9d., and even 1s. per dozen, and the annual value of the eggs and poultry produced in Aberdeenshire to a sum not less than £20,000.

In a reference to the parish of New Deer (1794) it is stated that "eggs in considerable quantities are purchased by every merchant in the parish and shipped for the London market." [13]

Orkney, which is now one of the most important egg-



producing districts in Scotland, with an annual export of over 3,000,000 dozen, commenced exporting in 1805, in which year the first recorded shipment was made of five cases.

### SMOKING BY WOMEN.

The habit of smoking among women is now widespread, and is one indulged in among all classes irrespective of age or social position. By many this is regarded as a modern innovation of a decadent age, and one which would have shocked our grandmothers, but, as in the case of many other facts that have been noted, this is no new thing. In the description of the parish of Abernyte (Perthshire) in the Statistical Account (1794) the reporter states:—

“The use of tobacco may almost be said to be excessive, especially among the female sex; there is scarce a young woman by the time she has been taught to spin but has also learnt to smoke. Smoking seems to have been introduced here as an antidote to rheumatism and ague, the favourable alteration, however, with respect to these diseases has produced only a greater avidity for this indulgence.”

### BEEES.

From the earliest times the value of honey has been appreciated as a sweetmeat, as a food, and as an important constituent in mead, a potent and favourite drink in olden times, while in Scotland it figures prominently in Athol Brose.

That the consumption of honey in this country could be greatly increased with much advantage to the health of those using it, is, in the view of those who are competent to judge, an indisputable fact, and it is further contended that an increase in production would be warranted by the remunerative nature of the undertaking.

Apart from the quantity of home-produced honey on the market, there is a very considerable import from Empire and other sources, chiefly New Zealand, Australia, Canada, and California. Over 120 years ago the same type of advice and the same competition from imports was being discussed. J. Walker (1812) writes:—

“The quantity of honey and wax that may be raised in Britain appears, at least upon paper, to be amazing. Their importation from foreign countries forms a considerable article of National expenditure, and to encourage the increase of them at home should therefore be an object of National attention. The farmers’ concern in domestic animals extends from the ox to the bee.” He urges that the Highlands and

Islands of Scotland are well adapted to support great numbers of bees, owing to the amount of food available on the pastures, which are "not merely enamelled but crowded with flowers." He shows that in Aberdeenshire, "which cannot be supposed to be more friendly to the bee than many places in the Highlands," a first swarm sells for 20s., and a good hive yields 10-12 Scots pints of honey worth 40s.-60s. "This affords a great profit to the small farmer, and should not be below the notice of the largest proprietor." [17]

Skene Keith (1811) states that "when an apiary is properly attended to, it pays very well, especially on the banks of the Dee and in the higher districts of the county (Aberdeenshire)." He cites the case of a farmer in Cromar, paying a rent of £20, who received in a year £42 from the sale of honey and £41 for beehives, presumably swarms. The value of the honey sold or consumed in the county he reckons at over £2000 per annum, but this sum could easily be increased to £20,000.

One objection to the keeping of bees is, he states, the expense of feeding them in an unfavourable spring. To meet this difficulty he relates that an ingenious device has been suggested by a friend who "has contrived to keep them in an ice-house in a state of insensibility, which is a saving of their winter provision." [19]

This is a story well worth a place among those which are regarded as specially characteristic of Aberdeen. To keep the bees in a state of cold coma, under which condition life would be maintained without the expense of feeding during a period when the bees were unemployed, would without doubt arouse the liveliest interest.

Scattered throughout the Statistical Account (1794) there are odd references to the suitability of certain districts for honey production. The parish of Birse was "famous for producing honey of great richness and flavour. In a favourable year a great deal is exported. Two men exported 100 Scots pints in 1794. About 300 bee-hives were kept during the winter, 1791-92."

The parish of Borgue (Kirkcudbright) (1794) "has long been deservedly celebrated for fine honey. It is clear as crystal and of the richest flavour."

#### INTER-TRADE IN HORSES BETWEEN CAITHNESS AND ORKNEY.

In the description of several of the parishes of Caithness and of Orkney embodied in the Statistical Account (1794) an interesting fact is recorded in regard to the considerable inter-trade in horses between Caithness and Orkney.

The account of the parish of Wick states that: "Horse-coupers or dealers buy up in summer all the year-old horses

they can find, and send them over to Orkney and sell them at a profit." The bulk of these horses were purchased in Caithness and Sutherland and "were of a hardy nature and small, the largest seldom over 14 hands." The annual export from Caithness would appear to have been about 300, and the value of the best of these "staigs or year-old horses from Caithness was up to £7 each." The remarkable fact was that these horses which went to Orkney as yearlings were re-sold by the Orkney farmers when seven or eight years old, and returned to Caithness.

Captain Henderson in his view of the agriculture of Caithness (1812) reports that "about 12 years ago the number of staigs or young horses exported to Orkney was about 320, and about 80 old horses on an average came from Orkney each year. But at present 250-300 came from Orkney to Caithness each year." He very properly suggests that "it is in the interest of both landlord and tenant to remedy this evil by contributing a fund to purchase and maintain a stallion of a strong hardy breed. By this means in a few years there would be a regular supply of plough-horses reared in the county which would be more hardy and durable than the second-hand horses taken from a distant market."

According to Sherrieff (1813), "very few colts are now exported from Caithness, but about 300 horses of all ages are annually exported from Orkney to that county." [20]

In the description of the parish of Orphir (Orkney) in the New Statistical Account (1843) it is stated that a few horses are commonly sold to Caithness people at from £8 to £10 each, and in some cases at double that figure.

About 1880 the total annual export of horses from Orkney to all outside markets was rather fewer than the export to Caithness seventy years previously. Since that time, and particularly within the last twenty-five years, Orkney has made rapid strides in the breeding and exporting of horses of an excellent and improved type.

#### RINDERPEST IN ABERDEENSHIRE.

Just over seventy years ago the agricultural community was seriously disturbed by an event which contained all the elements of a National calamity, but which, happily, owing to promptness, firmness, and foresighted statesmanlike handling by a body of farmers in Aberdeenshire, was restricted in its operations, and the threatened danger largely averted. I refer to the outbreak of Rinderpest in the summer of 1865.

The first outbreak was reported to have occurred among a herd of dairy cows in London during the last week of June 1865. Within a month the disease had become widespread,

and thousands of animals had died or been slaughtered. It was estimated that £30,000 worth of stock had been lost by dairymen in London alone.

The disease, while practically unknown in Scotland, would appear to have been known for centuries in Europe, where it took a heavy annual toll of the cattle stock. It is recorded that the disease was known in France in 810, and about the same time visited England, and again in 1225.

For nearly 500 years Britain was free of the disease, but between 1714 and 1760 outbreaks were frequent. The loss of cattle in two English counties alone in 1747 was 40,000, while in 1757 Cheshire lost 30,000 cattle in six months. The only recorded Scottish outbreak, prior to that now being dealt with, was at Portsoy in 1770, the disease having been introduced through the medium of hay imported from Holland.

The rapid spread of the disease in the summer of 1865 caused general alarm. On 11th August 1865 a meeting of the Sub-Committee of the Royal Northern Agricultural Society was called at the request of Mr W. M'Combie, Tillyfour, "to take into consideration the disease that has broken out amongst the cattle in London, and if any steps should be adopted for their mutual protection."

The meeting agreed to ask the Lord-Lieutenant of the county (Lord Kintore) to convene a public meeting "for the purpose of considering the best means of prevention." Four members of the Committee were appointed to investigate the existing outbreaks in the county, and to report, and they were authorised "to employ Veterinary Surgeons and to do all things necessary at the expense of the Society."

The members appointed were: Mr Copland, Millton of Ardlathan, Mr Campbell, Blairton, to investigate the outbreak in Buchan; and Mr S. Campbell, Kinellar, and Mr Reid, Graystone, to inquire into the outbreak at Forgue.

On the 18th August the Committee met to consider the reports relating to these investigations. It will be noted that the matter had been most expeditiously dealt with, only a week elapsing between the appointment of the reporters and the date of their report. The Buchan deputation reported that, accompanied by Mr Hay, V.S., Ellon, they visited Mr Jamieson, Berryhill, Peterhead. He had received a calf (from the south) at Ellon Station about 24th July. The calf was put to a cow to suckle, but in a few days both cow and calf died. These two animals had come into contact with eighteen other animals, of which sixteen had died. Mr Jamieson had done everything possible to prevent the spread of the disease by the isolation of affected cattle and of the cattlemen. They also visited Mr Keith, Bogenjohn, Strichen, who on or about 12th June had received two calves from Aberdeen. One died soon after, and it was replaced by another which

died on 1st July. By the 20th July there were twenty-two cattle dead out of twenty-four cattle coming into contact. The deputation stated that: "Your reporters cannot close this report without drawing the attention of the Society, and through it of the public in general, to the reckless and reprehensible manner in which cattle from diseased stocks are driven through our country and over our railways, and thus, it may be, sowing the seeds of disease broadcast over the country."

A case was cited of a lot of cattle, from a farm on which cattle had died from pleuro-pneumonia, being driven along the public road and coming in contact with other lots of cattle, and then being put on rail. The reporters very properly stated that: "If such a system cannot be put a stop to it is of little consequence what measures may be adopted by the County or by the Royal Northern Agricultural Society."

The Forgue deputation reported that, accompanied by Mr Stewart, V.S., Rothiemay, they visited the Forgue district, and ascertained that on 18th July four calves arrived at Huntly by rail from the South. Three of the calves were taken to the farm of Brackenbraes, Forgue, but were kept separate from the other stock. By the 26th July the three calves had died. The other calf went to Mr Ogg, Westertown, and was put to a cow, but died on 25th July, and by the 14th August the disease had spread and other eleven cattle had died.

In view of these Reports, indicating, as they did, the virulence of the disease and its menace to the cattle industry of the county, the Sub-Committee of the Royal Northern Agricultural Society agreed that the following resolution should be submitted for the approval of those present at the public meeting to be held that afternoon. The meeting, which was presided over by the Earl of Kintore, approved and adopted the resolution, which was as follows:—

"That application be made to the Secretary of State to extend to Scotland without delay the Orders and Regulations of the Privy Council for the prevention of the spread of the cattle plague in this country, and to urge on Her Majesty's Government the propriety of taking measures to prevent the importation of cattle from those countries where the disease is known to exist."

Another resolution adopted was to the following effect:—

"That this meeting, in order at once to meet the present emergency and the loss to parties who have suffered or may suffer from the loss of cattle, recommend a voluntary subscription for the current year of one penny per pound on proprietors and on farmers to be applied at the sight and in the discretion of the Central Committee."

The Chairman expressed the view that greater attention should be paid to the cleanliness of stock and of vehicles engaged in their transport, as such would go far to avert

such outbreaks, while Sir James Elphinstone referred to the desirability of an inquiry into the conditions under which cattle were shipped, and he expressed alarm at the large import of calves to the North from London, and of live cattle from Reval.

It was agreed at this meeting : " To arrange for the appointment of sub-committees of vigilance and protection in each parish or district."

At a meeting of the Committee of the Royal Northern Agricultural Society held on 1st September, correspondence which had passed between Lord Kintore and the Home Office anent the resolutions passed at the meeting on 18th August was submitted. It bore out that at a meeting of the Privy Council held on 26th August Orders and Regulations dealing with the prevention of the spread of cattle disease were extended to regulate the movement of stock, the purification of buildings and vehicles, and the disposal of carcasses, and that such Orders and Regulations should extend to all parts of Great Britain, and that Local Authorities should have power to appoint Veterinary Surgeons and to have power to seize and slaughter any infected animal and to destroy fodder or manure likely to propagate the disease, and further, " that it shall not be lawful to send or bring to any fair or market or to send by rail or boat or to drive along a road or to place on a road or on the sides thereof any animal labouring under such disease."

Readers will, I think, be struck by the fact that these decisions of the Privy Council agree very closely with the views expressed by the Committee of the Royal Northern Agricultural Society and its reporters.

At a meeting of the Central Committee, which was elected at the public meeting on 18th August, it was decided to form The Rinderpest Association, which came into being on 1st September 1865. This Association showed great energy in its efforts to limit the spread of the disease, and in this was eminently successful. By the end of December the disease might be regarded as having been got under control. At a meeting of the Finance Committee held on 12th January 1866, the financial statement showed that the income to date (roughly four months) from the voluntary assessment of 1d. per £ totalled £4133, 7s. 6d., and the liabilities £2471, 10s. 10d.

Compensation from the funds was paid on the basis of two-thirds of the value of cattle which died, and three-fourths of the value of those slaughtered.

By April 1866 the disease had been stamped out in Aberdeenshire.

Perhaps the most noteworthy feature of the methods adopted in Aberdeenshire for combating the disease, and within a reasonably short time suppressing it, was that relating

to the payment of compensation not only for infected animals which were slaughtered but also for animals which were slaughtered because of having been in contact with infected animals, and hence likely to spread the disease. This offer of compensation constituted an entirely new method of tackling disease, but one which was readily effective in achieving the objects aimed at.

To the Royal Northern Agricultural Society belongs the distinction and credit of introducing a policy which is to-day the established legislative policy of the country. There is ample evidence to show that the Aberdeenshire methods had not escaped the notice and warm approval of other districts.

Mr W. McCombie received a request from Mr Gladstone, then Chancellor of the Exchequer, for a report "of the proceedings in Aberdeenshire so honourable to the intelligence and forethought of that County."

A prominent London journalist thus referred to these proceedings: "Trust to yourselves in the first instance and don't delay. Organise, assess, offer compensation. Then take the pole-axe in hand and kill without asking many questions. That is what Aberdeenshire has done, and hence, while of all Counties in the Kingdom, it had most to dread from the Rinderpest, it is perhaps the one that will feel the effect least."

On receiving the Freedom of the City of Aberdeen on 26th September 1871, Mr Gladstone, who was then Premier, thus referred to the matter, and in doing so paid a high but well merited compliment to the county:—

"But there was another service, and a marked service, that Aberdeenshire did to the country at that very period, in the winter which separated the years 1865 and 1866. I allude to the cattle plague, and I wish to say here that which I have said elsewhere in public and in private, that it was an admirable spectacle, when all over the country we were wandering and groping about, some proposing the most absurd measures by way of remedy and precaution, and others feeling themselves to be totally in the dark—it was an admirable spectacle when the gentry and farmers of Aberdeenshire associating themselves together with nothing to rely upon except their own energy, except their own prudence and intelligence, devised for the ready, rapid, and complete extinction of that plague, the very remedy which, at a later period, after much ineffectual discussion, the Legislature found itself counselled by prudence to adopt. I cannot recall, my Lord Provost, so remarkable an example of local activity, self-reliance, practical ability, and wisdom, holding up for the whole nation a standard which that nation was ultimately glad to follow. And now, if ever that disease should unfortunately appear among us again, we have only got to put in operation your remedy—the remedy by which you, in the County of Aberdeen, taught us,

with full assurance and with the blessing of Providence, the mischief would be brought to a speedy and complete termination."

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# AGRICULTURAL RESEARCH IN SCOTLAND IN 1935.

BEING A BRIEF SUMMARY OF WORK AT THE  
SCOTTISH AGRICULTURAL RESEARCH  
STATIONS DURING THE YEAR.

*Readers desiring fuller information on any of the subjects mentioned  
should write to the Director of the Station at which the investigation  
is being carried out.*

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## INSTITUTE OF ANIMAL GENETICS.

UNIVERSITY OF EDINBURGH, WEST MAINS ROAD.

THIS report concerns itself solely with that part of the work of the Institute which can claim the interest of the breeder of live-stock for the reason that it deals with animals of economic importance.

### CATTLE.

*An Experimental Analysis of the Genetical Basis of Milk Yield.*—At Shothhead the first of the experimental heifers are now completing their lactations. These consist of pedigree Shorthorns of two types: the one sired by a dairy bull and out of beef cows, the other sired by a beef bull and out of dairy cows. The results so far obtained tentatively suggest that the latter group possess a higher capacity for milk production (this indicating the importance of the dam in selection). So far, of course, the numbers are not statistically sufficient, but the results, as far as they go, are suggestive. In order to check these results other matings have been made, and the young stock are growing up.

The two kinds of crossbred bulls between beef and dairy strains are now in use, and have been mated to Ayrshire heifers. A number of calves from this cross have been born.

At Cockburn, where a pedigree herd of cows is maintained, somewhat curious results have been obtained in the examination of the progeny of six different Ayrshire bulls. This being

so, it has been decided to calculate the values of the daughters on three lactation records. The animals are now entering on their third lactation. The stock on both farms available for this experimentation consists of five old bulls, three young crossbred bulls, about one hundred cows, and one hundred and thirty young stock.

#### FIGS.

Routine records are being maintained. The data are provided by the progeny of eight boars, each of which has not less than eight recorded litters on the books.

#### RABBITS.

The genetical analysis of new fur varieties is being continued. A successful attempt by rigorous selection to produce a strong and vigorous strain of Rex rabbits has been completed. The new waved coat found in the Rex has been studied. It is somewhat similar to Astrakhan and not unlike the waved character of the mouse and rat, behaving as a simple recessive.

#### POULTRY.

The progeny of hens habitually laying small eggs, mated to a cock from a large egg strain, has produced eggs of an intermediate size. These pullets have now been back-crossed to a male from the small egg strain in order to obtain more exact information concerning the mode of inheritance of egg size.

The development of a strain of Brown Leghorns, which lay continuously over a period of two years without the interlude of a moult, is meeting with success. No less than seven closely related birds which exhibit this character are available for further experimentation.

In order to provide information regarding seasonal variation in hatchability, fertility, and growth rate, incubation is being carried on throughout the whole of the year.

Attempts are being made to devise a test for the diagnosis of pregnancy in the cow, similar to that which is used in the case of the mare.

#### ANIMAL DISEASES RESEARCH ASSOCIATION.

##### MOREDUN INSTITUTE, GILMERTON, MIDLOTHIAN.

*Louping-ill.*—The results of the controlled field tests of the louping-ill preventive vaccine, carried out during the last few years, have been so satisfactory and consistent that this year it was considered justifiable to issue the vaccine as a

commercial product. Over 56,000 doses of the vaccine were prepared, but the demand for the product has far exceeded the supply. The preparation of the vaccine involves costly and laborious procedure, and the Institute has been much handicapped by the limited personnel available to cope with the demands for its production.

*Tick-Borne Fever.*—Although the causal parasite of this disease can now be readily demonstrated, its nature remains obscure and continues to be the subject of special study.

*Braxy.*—The formalinised whole culture vaccine, which is now issued as a single dose vaccine, continues to prove of marked efficacy, in that it is capable of reducing the braxy mortality to a figure of less than 1 per cent. During certain seasons on certain farms, however, the disease occurs in a highly virulent form, and in such cases it has been found that the inoculation should be repeated after an interval of fourteen days.

A large number of cases of braxy-like disease in sheep are being investigated to determine to what extent toxins of the *Clostridium welchii* group of organisms are responsible.

*Grass Sickness.*—A prolonged field investigation was carried out in the counties of Angus and Perth in 1935. The inquiry had as its special purpose the determination and identification of toxins present in per-acute cases of disease. The problem presents much difficulty, and its investigation is being actively prosecuted.

*Contagious Bovine Abortion.*—The research which is being undertaken by the Association has as its ultimate object the development of effective methods of prevention by means of dead vaccines. For this purpose, the disease has been systematically studied in small laboratory animals. While much information of a valuable nature has been gained, a dead vaccine capable of affording definite protection has not yet been evolved.

*Enzootic Abortion in Ewes.*—This disease, which is widely distributed in Scotland and is of real economic importance, continues to be the subject of biochemical study. Various minerals and accessory food factors have been employed in extensive controlled field experiments on the assumption that the disease represents a dietary deficiency, but definite information upon its cause is still lacking.

*Lactation Tetany and Magnesium Metabolism.*—Lactation tetany has proved to be constantly associated with magnesium

deficiency in the blood, and, with the primary object of further elucidating the pathology of the disease, a systematic study of magnesium metabolism in the rabbit and sheep is being carried out.

*White Scour in Calves.*—Since there is evidence that the ingestion of adequate amounts of vitamin A by the young suckling calf is of value in the prevention of white scour, controlled field experiments designed to determine this question have been initiated, and these are being checked by the systematic assessment of the amounts of vitamin A present in the colostrum of the dam.

*Pine.*—The investigation of pine as it occurs in certain of the western islands showed that the disease was a nutritional anæmia, in which the administration of iron appeared to be of specific preventive and curative value. There was evidence that a similar condition occurred in certain areas on the mainland of Scotland, and the result of further investigation has proved that an extensive affected area exists in the neighbourhood of the Cromarty Firth. In collaboration with the East of Scotland College of Agriculture, the condition known as 'Cheviot pine' has been investigated in Roxburghshire, and the evidence strongly suggests that this condition also represents a form of chlorosis, which responds readily to the administration of assimilable iron compounds.

## THE ROWETT RESEARCH INSTITUTE.

BUCKSBURN, ABERDEEN.

*Fodder Crop Conservation.*—Further investigations on dried grass, the practical means of winter feeding, have been undertaken. Sheep, both at the Duthie Farm itself and at the Institute's farm of Garrochoran in Argyllshire, have been fed with dried grass, moulded into cubes of suitable size. This method of cubing results in a considerable decrease in wastage, particularly in high winds. At the Duthie Farm about forty Greyface gimmers were wintered on pasture with dried grass as the only supplement. Their record was compared with about forty similar sheep fed on winter pasture supplemented with meals, hay, kale, and roots. Despite an exceptionally hard winter the sheep fed dried grass grew, lambed, and milked quite well, and their appearance and record is only slightly below that of their controls on a more generous diet. At Garrochoran, one heft carrying about sixty ewes has been fed dried grass, and they have, up to date, done well. On

the whole it may be said that dried grass shows distinct possibilities as a winter food for breeding sheep.

*Cattle.*—An experiment with calves has been conducted to find whether pasteurisation has any ill effect on the nutritional quality of milk. This work, which is being duplicated at the National Institute for Dairying, Reading, has been undertaken at the request of the Milk Marketing Boards. The result of the first experiment was not clearly decisive, and a second experiment is in progress. The difference between the nutritional value of pasteurised as opposed to unpasteurised milk, if there is any, cannot be a large one. From the result of a supplementary experiment with calves, there would appear to be a much greater difference between the nutritional value of milk of the highest grade and that of ordinary unpasteurised milk. The growth of calves on the graded milk was considerably better.

Experiments on the control of contagious abortion in cattle are in progress. Feeding iodine as a preventive measure gave inconclusive results. The data collected does suggest that feeding iodine was beneficial in reducing the number of abortions, but, nevertheless, numerous abortions occurred in cows receiving iodine. Control by segregation and isolation, with disposal of reactors, appears to be of doubtful applicability to conditions in this area, where practically no dairy herds are self-contained and where replacements are commonly made by purchase. A dead vaccine prepared by the veterinary officers of Northern Ireland is being tested, but the experiment is still in progress, so that no results are yet available.

*Pigs.*—In addition to the importance of a properly balanced ration, it has been shown that the quantity of food fed and the rate at which the ration is increased affects both the economy of food utilisation and the carcase quality of the pig. Too generous feeding apparently results in an uneconomical amount of food required per unit of live-weight gain, while the fat laid on is beyond the requirements for a first-class bacon carcase. On the other hand, insufficient feeding will result in insufficiently rapid growth, and possibly also in soft pigs. To strike the optimum rate of increase of the ration is the object of experiments in progress.

The Pig Recording and Litter Testing Scheme, which is run in conjunction with the North of Scotland College of Agriculture, has proved a success. The Scheme has also given opportunity for much advisory work being performed of a directly useful nature.

*Poultry.*—The proper work of this Department, which deals with the nutrition of poultry, has been somewhat disorganised

by an outbreak of fowl paralysis. Advantage was taken of this accidental presence of an epidemic disease to study the effect of nutrition upon it. The disease is so deadly, however, that none of the nutritional measures applied had any really significant effect on its control. A considerable amount of data on the disease outbreak has been collected and studied, and useful information thereby acquired.

*Sheep*.—Experiments on the control of the internal parasites of sheep have been continued in collaboration with the North of Scotland College of Agriculture. Salting pasture was found ineffective in controlling infestation with the smaller types of stomach-worm which are resistant to drugs. An extreme variability in the number of worms which individual sheep contain was shown to be correlated with the sheep's rate of growth. Lambs growing rapidly tend to contain most worms, probably owing to their greater intake of grass.

## THE SCOTTISH PLANT BREEDING STATION.

CRAIGS HOUSE, CORSTORPHINE, EDINBURGH.

Experimental work is in progress with grain crops, potatoes, herbage plants, and swedes. As it is customary, however, to refer to the work on one of these crop plants each year, on this occasion the cereal breeding experiments will be reviewed.

*Oats*.—The practical objective of the oat-breeding investigations is to secure what may be termed special purpose varieties—that is, varieties adapted to different conditions of soil and climate, and also for specific purposes. On fertile soils lodging often damages the crop, and consequently causes financial loss. In late districts there is a need for hardy, early ripening, and more productive varieties. Defects known as 'blast' or 'blindness' of the spikelets and 'grey-leaf' or 'dry-spot,' both of which have been prevalent in certain varieties in recent years, indicate the importance of introducing new varieties which are resistant to or immune from these disorders. For some years improved varieties of the huskless oat have been grown in Canada. The grain, which is devoid of husk, is used for feeding pigs and poultry. The absence of husk renders this oat grain very suitable for poultry feeding, and the view has been expressed by an authority on the rearing of poultry that if huskless oat grains were available at an economic price there would be an outlet for them among poultry keepers.

In the 'Transactions,' Vol. XLIV., 1932, reference was

made to the Society's two new varieties of oats, Elder and Bell, which were registered by the Department of Agriculture for Scotland in 1930 and 1932 respectively. The former variety is noted for its resistance to lodging, and also for producing a good yield of grain on fertile soils. In some districts, however, growers have found that it is rather too late in ripening for their requirements, and attempts are therefore being made to produce an earlier ripening Elder type. The other new variety, Bell, has shown that it is well adapted to high-lying farms in many districts. It has a very good quality of grain and straw, and is proving to be a suitable substitute for the Sandy oat.

In January 1934 another of the Society's new oat varieties was registered by the Department of Agriculture for Scotland. It is known as "Early Miller," and the following is the official description as given in the Certificate of Registration:—

"A white-grained oat which is in general character intermediate between its parents, Potato and Record; an early ripening variety suitable for general cultivation and high-yielding on fertile soils. The grain is short and plump, well filled, and of an attractive colour; not thick in the husk, gives a high bushel weight, and shows promise of being a high-class milling oat. The straw is of good fodder quality and of medium length, and possesses a high degree of resistance to lodging."

Early Miller has been giving very encouraging results in many districts. It ripens early and produces an attractive sample of grain. As an indication of its high-yielding capacity, it may be mentioned that on a 26-acre field in West Lothian in 1935 this variety gave a yield of over 35 cwt. of grain per acre, and the crop did not lodge. The grain weighed 47 lb. per bushel. In 1935 in Fife a yield of about 36 cwt. of grain per acre was reported.

Attempts are being made by hybridisation to secure a still greater degree of resistance to lodging, in combination, of course, with other desirable characters. The Elder variety and several unnamed hybrids are being used as parents for this purpose, and a number of early ripening types with upstanding straw are undergoing trial.

It has been shown by Canadian workers that 'blast' or 'blindness' of the oat may be due to the effects of drought. It has been commonly observed that varieties react differently to dry conditions, some being more liable than others to develop blind spikelets. Blast having been more prevalent than usual during the recent dry summers, conditions were suitable, therefore, for differentiating varieties in this respect. It is worthy of note that in 1935 one series of hybrids in the trial plots at Corstorphine was markedly free from blind

spikelets, while many other selections growing alongside showed a large amount of the trouble. These resistant selections exhibited other desirable characters, and they may be suitable for areas where 'blast' or 'blindness' is common.

Several huskless oat crosses are being examined to see whether any varieties, having this type of grain, may be evolved, which are likely to prove suitable for growing on a commercial basis in Scotland.

*Barley.*—The Scottish Society for Research in Plant Breeding was invited to co-operate with the Director, Seed Testing Station, Department of Agriculture for Scotland, and with the North of Scotland College of Agriculture, in a scheme for improving Common Scotch Barley by the method of single-plant selection. This barley appears to consist of a mixture of types, and attempts are therefore being made to select the best of these and to produce pure strains of them. Many selections were made in 1934, and in 1935 further selections were made from their progenies. These will be undergoing preliminary trials in 1936.

Various varieties of barley have also been hybridised for the purpose of securing high-yielding, attractive grain types which are resistant to lodging. An awnless six-rowed barley is one variety which is being used as a parent, and the hybrid progenies of this barley will be critically examined for promising awnless types.

*Field Beans.*—A collection of varieties of field beans has been grown for observation. Single-plant selections have been made from these to ascertain whether any improved strains may be evolved simply by selection. Comparative trials of these have yet to be made.

*Soya Beans.*—In many countries these beans are an important crop. It would seem that hardier varieties are becoming available for cultivation in cooler areas, and small-scale trials of some of these varieties have been made at Corstorphine. The results in 1935 were less encouraging than were those in 1934, but in the trials in both years small quantities of seed were obtained, and the trials are being continued to see if any types likely to be adapted for cultivation under Scottish conditions can be secured.

*Maize.*—A strain of maize reputed to be one of the most hardy kinds has been grown from local seed in small plots for several years at Corstorphine. While a few plants have always set some seed each year, it does not seem that the variety is suitable for general cultivation here.



THE WEST OF SCOTLAND AGRICULTURAL  
COLLEGE.

## (a) MILK PRODUCTION DEPARTMENT.

*Proven Sires.*—A large amount of information has now been secured on Proven Sires of the dairy breeds in Scotland, and some of the results are available. A list has been prepared of 731 Proven Ayrshire Sires and 83 Proven Friesian Sires, each of which has 10 or more daughters yielding at least 280 lb. butter-fat, or 224 lb. as a heifer, in a lactation not exceeding 52 weeks and calving again within 15 months of the start of the lactation. The highest number of good yielding daughters for any Proven Sire is 87.

In an effort to determine the value of this list as a partial guide in breeding practice, a study has been made of the sires and grandsires of the Proven Ayrshire Sires. It was found that 296 bulls have sired 1 Proven Sire each, while 57 have 2 proven sons each, and 57 have 3 or more proven sons. This last group of 57 may be looked on as having been of some considerable value to the breed. Two bulls of this group have 22 proven sons each.

When the grandsires of Proven Sires are considered, it is found that 66 bulls have been the paternal grandsires of 3 or more proven bulls each, while 66 have been the maternal grandsires of 3 or more such bulls. It is interesting to note that while 13 bulls were the paternal grandsires of 12 to 32 proven bulls each, no bull was the maternal grandsire of more than 10 proven bulls.

Only 18 per cent of the Proven Sires had no near male ancestor in the Proven Sire list, while the remaining 82 per cent had one or more of their near male ancestors in this list. It would appear, therefore, that it is of some advantage to have Proven Sires close up in the pedigree of a bull if he also is expected to become a Proven Sire.

From the figures for bulls with only one grandsire proved, or their sire and one grandsire proved, it would appear that a proven paternal grandsire is of more importance than a proven maternal grandsire. This was shown in another way—60 per cent of all the Proven Sires had Proven Sires, 49 per cent had proven paternal grandsires, and only 33 per cent had proven maternal grandsires.

It would appear, therefore, that in picking a bull which it is hoped will become a Proven Sire—that is, a bull which will sire high-yielding daughters—attention should be given first of all to seeing that he has a Proven Sire, then a proven paternal grandsire. His maternal grandsire is perhaps of less importance. It need hardly be mentioned that only the

male ancestors of Proven Sires are being considered here—other factors must also be taken into consideration.

*Living Proven Sires.*—If information regarding the breeding value of a bull is to be of the greatest possible value, it should be secured while he is still alive. Consequently a list of living Proven Ayrshire Sires has been prepared in co-operation with breeders and the breed society. The importance of the early ascertainment of the breeding value of a bull is demonstrated by some of the animals in this list.

One bull, when mated to cows averaging over 850 gallons of milk, sired daughters which yielded 25 per cent more milk and 44 per cent more butter-fat than their dams. Another, mated to cows giving over 950 gallons of milk, sired daughters which gave 23 per cent more milk and 27 per cent more butter-fat than their dams.

*Succulent Feeds.*—A further stage has been reached in the comparison of succulent feeds for milking cows. It has been found that swedes, mangolds, carrots, potatoes, marrow stem kale, dried beet pulp, silage, and A.I.V. fodder are all of about the same value when compared on the dry matter basis. A pound of dry matter in any one of these feeds is equivalent to a pound of dry matter in any other. Choice between them will depend on cost of production or purchase.

*Milking Machines.*—Two surveys, five years apart, have been made of the milking machines in use in milk recorded herds in Scotland. It was found that during the period the percentage of milk recorded herds which were machine milked rose from 13 to 17, while the milk recorded cows machine milked rose from 21 to 22 per cent. This increase may not seem large, but it means that over 1300 more milk recorded cows are being machine milked than was the case five years ago.

*Low-testing Milk.*—At times there are many complaints regarding low-testing morning milk. This question is being studied, and although it is too early yet to make any general statement regarding the problem, it has been found in certain cases at least that part of the trouble is due to inefficient milking in the morning.

#### (b) MILK UTILISATION DEPARTMENT.

The investigations made during the past year on the quality of market milk suggest that while farmers in S.W. Scotland are becoming increasingly conscious of the importance of hygienic methods in milk production, and have practised them

with a considerable measure of success, they have not adequately realised the increasing dangers of mastitis, or the depreciating effects which this widespread disease exerts on the yield and flavour of milk, or on its manufacturing properties. Thus, among the 860 samples of milk of individual cows recently subjected to critical laboratory examination, no less than 357 (or 41 per cent) were found to be definitely infected with mastitis. In occasional herds an infection as high as 80 per cent has been observed. Of the bulk samples of market milk originating from individual farms, over two-thirds showed evidence of the disease. The lack of definite clinical symptoms and the absence of any physical alteration in the milk of cows in the earlier stages of the malady has rendered its incidence in individual herds somewhat obscure; less than 3 per cent of the milk samples examined and in which laboratory tests had established a mastitis infection were physically altered. Apart from the segregation and disposal of infected stock, no adequate means for controlling the disease has yet been found. A local veterinary surgeon interested in the control of this all-pervading disease employed intramammary injections of a proprietary 'anti-streptococcal disinfectant'; samples of milk of the infected cows before and after treatment were examined in the laboratory, and while a reduction in the relative numbers of streptococci was temporarily effected, the disease was not suppressed.

A mammary disease, locally called 'udder clap,' which has caused considerable losses to dairy farmers during the summer of 1935, was made the subject of inquiry. This disease, which affects dry cows and heifers approaching calving, was especially prevalent during the warm weather of July and August, and appears to be fly-borne. The disease is of sudden onset; the secretory tissues of the udder are rapidly destroyed, and an evil-smelling exudate emerges. The death-rate is high, and unless the cow is slaughtered as soon as inflammation is observed, the flesh turns black and the carcass is condemned at the abattoir. Samples of the exudate from infected udders were found to contain predominantly a non-hæmolytic streptococcus, and an associated staphylococcus.

The Hill Curd Tension Test was applied to a series of samples of Certified and Grade A (T.T.) milks in order to determine the incidence of soft curd milk, which is claimed to be of special value in infant feeding. The proportion of soft curd milks (less than 30 grams tension) was found to be less than 10 per cent in the herds tested. Some of these soft curd milks showed evidence of a mild mastitis infection. The effect of mastitis in lowering the curd tension was established by reference to the freshly drawn milk of individual cows in a herd in which the disease was operative. It was found that the majority of infected cows had a definitely

lower average curd tension than those which were free from mastitis.

*Butter and Cheese Defects.*—The chief defects observed this year in farm and factory cheeses were soft pasty body associated with mastitis infected milk, and off flavours due to the use of contaminated raw materials. Two cases of the dreaded taint in farm-made cheeses were investigated; in both the commercial rennet extracts employed were found to contain putrefactive bacteria which could reproduce the offensive odour very exactly in selective media and in processed cheese. It was also observed that when such an infected rennet is used, cheeses made from the milk of herds in which mastitis is prevalent were more liable to develop the putrefactive taint during curing than cheese made from normal milk.

Flavour defects in butter samples examined this year were most commonly caused by moulds derived from the butter-making utensils or packages or by bacteria of water origin.

#### EXPERIMENTAL WORK.

*Milk.*—The relative accuracy of the Methylene-blue Reduction Test for determining the market quality of milk was studied. Comparative trials indicated that the plate count, carefully determined, is a more reliable method of grading milk than the Reductase Test. By reference to extensive trials of the assessment of milk by these two methods, the Bacteriological Department of the West of Scotland Agricultural College has shown conclusively that the Reductase Test not infrequently fails to locate high count milks, and that *per contra* it may assign to a low category milks containing relatively small numbers of bacteria.

*Cheese.*—In the manufacture of cheddar cheese with pure cultures of lactobacilli, it is necessary when normal amounts of the selected starter are employed to ripen the inoculated milk at blood heat for a definite interval (1½ hours on the average) and prior to renneting to cool the ripened milk back to 86° F. This procedure implies additional heating and cooling of the cheese-milk; if it could be established that by adding much larger than the normal amounts of the lactobacillus starter, and employing the ordinary cheese-making temperatures, such heating and cooling could be eliminated, the manufacturing process would be materially simplified. To determine this point, 3 per cent of starter of the *B. bulgaricus* and *B. acidophilus* types were added to the cheese-milk at 86° F. and the milk allowed to ripen for an average interval of 1½ hours before renneting. By this means normally working

cheeses were obtained. But although the curd characteristics appeared to be satisfactory at the time of making, the ripe cheeses were somewhat brittle and short in texture. Control cheeses simultaneously made with normal amount of the lactobacillus starter (1 per cent), but with the temperature adjustments shown by previous experimental work to be necessary, were of excellent body and texture.

As already indicated in previous reports, a common cause of slow-working and weak-bodied cheese is the presence in the primary milk of the produce of a few mastitis-infected cows. These features were found to be greatly exaggerated when reference was made individually to the cheese-making properties of the milk of mastitis-infected and of healthy cows. Specially designed small-scale equipment by the use of which accurate technical control could be exercised over the manufacturing process was employed. While the milk of individual cows free from udder infections in all cases produced normally working cheeses and curds of good body and texture, mastitis-infected milk invariably exhibited some abnormality in its conversion into cheese. In some stages of the disease the milk of infected cows was found to work very slowly, and the curd throughout the manufacturing process was weak and lacking in elasticity; the pressed cheeses from such milk were invariably soft and deficient in body. Even in those cases where a normal acid development was obtained with mastitis-infected milk, the completed cheeses had an unsatisfactory body and texture. Occasionally the curd from the milk of infected cows was so soft and lacking in body that it could not be properly consolidated in the chesit, and oozed past the sides of the lid or follower when put under normal pressure.

*Butter.*—The butter-making qualities of the milk of cows fed on extracted and unextracted Soya meal was assessed by a series of comparative feeding trials, both sweet cream and ripened cream butter being made. Little difference in the flavour between the two groups could be detected, but it was observed that the unextracted Soya meal resulted in a better textured butter, and was considered to be the better form of the foodstuff for the production of winter butter.

## THE HANNAH DAIRY RESEARCH INSTITUTE.

### KIRKILL, Ayr.

*Nutrition.*—A study has been made of the nutritive value of proteins in relation to grass conservation. Little or no difference was found between the proteins of fresh grass,

ensiled grass (using A.I.V., molasses, and ordinary silage), and artificially dried grass. It was, however, found that spring grass was markedly superior to autumn grass as a source of protein for milk production.

Investigations have also been made into the protein requirements of dairy cows for maintenance and into the value of various types of milk for calf rearing.

*Milk Secretion.*—Further work has been carried out in an attempt to elucidate the means by which the food constituents are transformed into milk. Some progress has been made, but the problem is inevitably a 'long range' one, and immediate practical results cannot be looked for.

*Tuberculosis.*—A re-survey has recently been made of the herds in and around the Institute's experimental eradication area. The results show that freedom from infection in many of the herds has not only been maintained, but that still further progress has been made in eradicating the disease from the area. Moreover, the 'leavening' effect of the area in the surrounding district is now clearly apparent, one-third of the 200 herds within a five-mile radius from the centre of the area being now free from reactors—a figure without parallel elsewhere in Great Britain.

*Contagious Abortion and Mastitis.*—In co-operation with the Agricultural Research Council and the Scottish Council for Research in Veterinary Science, investigations are being undertaken into various problems connected with these diseases. In particular, segregation methods are being tried out as a means of eradicating contagious abortion, while the value of special hygienic measures and of the use of therapeutic agents in cases of mastitis is also being investigated.

*Pasteurisation.*—A detailed inquiry has been made into the design, operation, and efficiency of pasteurising plants in Scottish cities. The results show that, while the general standard is satisfactory, improvements are desirable in many important details. A full report of the inquiry, together with numerous practical recommendations, has been published.

*Canned Milk Products.*—Work has been continued into various defects which are found to occur in canned milk products. Special attention has been given to the occurrence of heat coagulation and fat separation in evaporated milk, and of bitterness and of black discoloration in canned cream.

## MACAULAY INSTITUTE FOR SOIL RESEARCH.

CRAIGIEBUCKLER, ABERDEEN.

The work carried out at the Macaulay Institute for Soil Research is divided into the following main groups: Soil Fertility Investigations and Advisory Work, Soil Surveys and Geological Work, the study of Peat Soils, and Soil Drainage Investigations.

*Soil Fertility Investigations and Advisory Work.*—In soil advisory work, tests are carried out on samples of surface and subsoil, with a view to determining whether the soil is being adequately supplied with plant foods. Based on the results of these tests, reports are issued which provide the farmer with information as to whether or not lime is required, and in what quantity, the amount and kind of manure which is considered most suitable for the soil in question, &c. Well over 1000 soils have been examined during the past year and relative advisory reports issued.

Pot and field experiments for the estimation of the manurial content of the soil, on lines similar to those followed in previous years, were carried out. The soils studied in these experiments are also examined by various chemical methods, and modifications in the methods used in routine advisory work are made if found necessary.

The study of forest soils by the pot method, which was begun last year in conjunction with the Forestry Department of Aberdeen University in order to see if ordinary methods could be applied to forest plants, is being continued.

The experiments carried out in conjunction with the Permanent Committee for Basic Slag have been continued, and, in order to study the residual effects, the yield of oats was determined at one of the centres.

Special fertility investigations on forest nursery soils have been carried out, and joint work with the North of Scotland College of Agriculture in a series of rotation experiments with lime and artificial fertilisers has been continued.

*Soil Surveys and Geological Work*—Soil surveys are being carried out on—

1. Eastern part of Kincardineshire.
2. Durris, Kincardineshire.
3. Aberdeenshire.
4. 'Brown Soil' Areas. (The study of representative 'brown' soils occurring in Scotland, in order to find their relation to the Continental 'Brown Earths,' is being continued.)

Investigations of the geology and mineralogy of soils and parent materials in the areas surveyed have been carried out. Soils from other areas have also been studied.

*Peat Soils.*—Lack of funds has again made it impossible for much experimental work to be carried out at the Lewis Farm, but the drainage and road-making experiments have been continued and extended. The pasture improvement trials are being carried on, and some further areas of moorland are being converted into pasture. The Lewis crofters continue to take advantage of the scheme whereby they may carry out similar reclamation work on their own land with the aid of implements lent by the Macaulay Farm.

Throughout the year the milk produced by the tuberculin-tested cows at the farm has been sold in Stornoway, and the poultry work has developed considerably. Sheep and pigs are now kept on the farm.

Advisory work on peat soils has been undertaken, and other laboratory investigations on peat have been carried out. By means of a field survey it has now been found possible to draw up a general classification of peat deposits.

At the request of the Commissioner for Special Areas in Scotland, an extensive scheme of reclamation is being undertaken on certain areas of peat-land in the south of Scotland. The task of draining the peat has been greatly facilitated by the use of a machine specially designed for the cutting of drain trenches.

*Special Investigations.*—The pasture investigations undertaken jointly with Mr Heddle of the Edinburgh College of Agriculture have been continued, and some of the results have been published.

An investigation is being carried out on the nutrient content of various layers of a number of selected Scottish soils.

During the year, apparatus for the carrying out of spectrographic analysis, purchased with funds generously provided by the Agricultural Research Council, was installed at the Institute, and a considerable number of analyses are now carried out by this method.

*Study of the Drainage Constituents of the Soil.*—The work on the Craibstone lysimeters was continued during the year 1935. Turnips were grown, with manurial treatment given to Nos. 2 and 3. No. 1 was untreated. No. 3 received lime in the previous autumn. The crop was weighed, and ash analyses are being performed.

From time to time the drainage waters were turbid with suspended colloidal material. This material was removed by flocculation with dilute acid, and by retention on a mem-



brane filter. Comparative analyses of the colloidal material removed by these two methods were made, and are being continued, to ascertain the effect, if any, on the composition obtained by the use of the dilute acid.

Leaflets giving instructions for the taking of soil samples for analysis are issued on request to farmers who wish advice on problems of manuring and liming. Copies of reprints of articles published, and any other information in regard to the work of the Institute, may also be obtained by applying to the Secretary.

## MILK RECORDS.

## THIRTY-THIRD YEAR—RECORDS OF 34,872 COWS.

By WILLIAM STEVENSON, B.Sc., N.D.A., N.D.D., Superintendent,  
The Scottish Milk Records Association.

SYSTEMATIC milk recording in Scotland was continued in 1935 under the direction of the Scottish Milk Records Association on the same lines as in 1934 and previous years. The scheme of private or unofficial milk records for unregistered herds inaugurated in 1924 was also continued during this year.

The Association in 1935 consisted of the following members :

Name and Address.	Body Represented.
Mr William Mitchell, Bannan, Straiton .	Central and South Ayrshire Milk Recording Society (6 Circuits).
Mr William D. M'Cubbin, Lochlands, Maybole .	
Mr William Niven, Estate Office, Sorn .	
Mr Andrew Wilson, Finlayston, Ochiltree .	
Mr George Templeton, Carnell Farm, Hurlford .	Central Ayrshire No. 2 Milk Recording Society.
Mr James Barr, Whiteshaw, Carluke .	Central Scotland Milk Recording Society (5 Circuits).
Mr T. Johnston, Standalane, Falkirk .	
Mr Alex. Paterson, Cathburn, Newmains .	
Mr George Stewart, The Drum, Bo'ness .	
Mr R. R. Wardrop, Ditch Farm, Cambuslang .	
Mr Alex. Y. Allan, Aitkenbar, Dumbarton .	Dumbartonshire Milk Recording Society.
Mr Matthew Cochrane, Catlinns, Lockerbie .	Dumfriesshire Milk Recording Society (3 Circuits).
Mr Robert Miller, Shawsholm, Closeburn .	
Mr Mungo Sloan, Hunterhouse, Lochmaben .	
Mr Hugh Andrew, Lennoxlove, Haddington .	
	East Lothian and Border Milk Recording Society.
Mr A. Dryburgh, Methilhill, Windygates .	Fife Milk Recording Society (2 Circuits).
Mr Gilbert R. M'Garva, Estates Office, Colinsburgh .	
Mr D. J. Gordon, Cullaird, Inverness .	Highland Milk Recording Society.

Name and Address.	Body Represented.
Mr Dugald Graham, West Backs, Campbelltown	Kintyre Milk Recording Society.
Mr John T. Kirkwood, B.Sc., N.D.A., Scorieholm, Lesmahagow	Lesmahagow Milk Recording Society.
Mr Robert Allan, Broughton Skeog, Sorbie	Lower Wigtownshire Milk Recording Society.
Mr Robert Laird, Lawthorn, Irvine . . .	North Ayrshire (John Speir) Milk Recording Society (3 Circuits).
Mr J. M. Matthew, Girthill, Saltcoats . . .	
Mr Thomas Murdoch, West Tannacrieff, Kilmarnock	
Rt. Hon. Lord Carnegie, K.C.V.O., Elsick, Newtonhill	North of Scotland Milk Recording Society (3 Circuits).
Mr J. D. Paton, Grandhome, Woodside . . .	
Mr Robert Howie, Flatterton, Greenock . . .	Renfrew and Bute Milk Recording Society (2 Circuits).
Mr John Telfer, Branchal, Bridge of Weir . . .	
Mr George W. Lambie, Pilmuir, Newton Mearns	Renfrewshire (Upper Ward) Milk Recording Society.
Mr Andrew Cochran, High Ardwell, Kirkcolum	Rhins of Galloway Milk Recording Society (4 Circuits).
Mr John Forster, Mains of Larg, New Luce	
Mr Alex. N. McCaig, Challock, Stranraer . . .	
Mr James Wither, Awhirk, Stoneykirk . . .	
Mr H. G. Baird, Kirkchrist, Kirkcudbright	
Mr George Barbour, Auchengibbert, Crockettford	Stewartry of Kirkcudbright Milk Recording Society (5 Circuits).
Mr T. Graham Clement, Howwell, Kirkcudbright	
Mr Hugh Hastings, Powillimount, Kirkbean	
Mr Sinclair Watson, Viewfield, New Galloway	
Col. W. T. R. Houldsworth, Kirkbride, Maybole	
Mr James Howie, Muirside, Holywood . . .	The Ayrshire Cattle Herd - Book Society of Great Britain and Ireland.
Mr John R. Miller, Midkelton, Castle Douglas	
Mr A. W. Montgomerie, Westburn, Cambuslang	
Mr James Kilpatrick, Craigie Mains, Kilmarnock	The British Friesian Cattle Society.
Mr John Telfer, Branchal, Bridge of Weir . . .	
Mr George Buchanan, Hunterhill, Paisley . . .	The Highland and Agricultural Society of Scotland.
Mr W. P. Gilmour, Balmangan, Borgue	
Mr Alex. Munro of Leanach, Culloden Moor	
Mr James Dunlop, Midland, Prestwick . . .	The West of Scotland Agricultural College.
Principal W. G. R. Paterson, 6 Blythwood Square, Glasgow	
Mr John N. Watson, Tarelgin, Coylton . . .	The Edinburgh and East of Scotland College of Agriculture.
Mr A. Cunningham, D.Sc., 13 George Square, Edinburgh	
Mr Alexander Lauder, D.Sc., 13 George Square, Edinburgh	

Name and Address.	Body Represented.
Mr G. G. Esslemont, M.B.E., B.Sc., 41½ Union Street, Aberdeen	The North of Scotland College of Agri- culture.
Professor J. Hendrick, Marischal College, Aberdeen	
Mr J. F. Tocher, D.Sc., 41½ Union Street, Aberdeen	
Mr John Forster, Mains of Larg, New Luce	Animal Diseases Research Association
Mr W. Cassels Jack, Robiesland, Lanark .	
Mr A. B. Fowler, B.Sc., Kirkhill, Ayr. .	The Hannah Dairy Re- search Institute.
Mr Norman C. Wright, M.A., Ph.D., Kirkhill, Ayr	
Mr Allan Barr, Hobsland, Monkton . .	Co-opted Members.
Mr Andrew C. M'Candlish, Ph.D., B.Sc., Auchincruive, Ayr	
Lord Rowallan, Rowallan, Kilnarnock . .	
Sir Hugh Shaw Stewart, Bart., K.C.B., Ardgowan, Inverkip	
Major Walter G. Shaw Stewart, Ardgowan, Inverkip	

*Chairman*—Mr James Kilpatrick.

The following were the principal members of the staff :—

*Secretary and Treasurer*—Mr John Howie

*Superintendent*—Mr William Stevenson, B.Sc., N.D.A., N.D.D.

*Assistant Superintendent*—Mr Percy H. Hart.

## SCHEME OF OFFICIAL MILK RECORDS.

### ADMINISTRATION.

In 1935, as in previous years, the scheme of official milk records was administered by the Association through local milk recording societies. The grant from the Treasury, obtained through the Department of Agriculture for Scotland, was continued in 1935 on the same conditions as in the previous year. The amount authorised was £2543, compared with £2519 for 1934.

Grants were allocated to local societies on the following scale :—

1. Societies testing at intervals of not more than twenty-one days :—

- (a) The hire of the necessary milk-testing appliances free of annual charge, the society to upkeep the apparatus in good condition.
- (b) An annual grant of 9s. 6d. per member towards the cost of surprise check tests.

2. Societies testing at intervals of from twenty-two to twenty-eight days :—

- (a) The hire of the necessary milk-testing appliances free of annual charge, the society to upkeep the apparatus in good condition.
- (b) An annual grant of 8s. per member towards the cost of surprise check tests.

During the latter part of 1934 and the earlier months of 1935 every effort was made to obtain new members for local societies throughout the various dairying districts of Scotland, and 67 definite applications were received. But for various reasons, such as the continued depression in the industry, members disposing of their dairy herds or removing from their farms, &c., there were a considerable number of resignations.

All the local milk recording societies which operated in 1934 continued in 1935. Owing to gradual increase in the total membership of the societies across Central Scotland, it was found necessary to set up an additional recorder's circuit in that area. A joint meeting of the East Kilbride and District Society, the East Stirlingshire Society, and the West Lothian Society was held in Glasgow on 14th November, when it was unanimously agreed to amalgamate these three societies to form one larger society, to be known as the Central Scotland Milk Recording Society; to accommodate surplus members from the Dumbartonshire Society and the East Lothian and Border Society, and form an additional circuit—namely, five circuits under the new society. The Central and South Ayrshire Society and the North of Scotland Society also found it necessary, owing to increases in membership, to rearrange members and form additional circuits.

The number of recorders' circuits in 1935 was 41, an increase of three circuits from the previous year. The number of herds officially tested was 770, and the number of cows officially tested, 34,872, an increase of 14 herds and 1967 cows from the previous year, and the largest number of herds and of cows tested in the history of the Association. The position in 1935 was considered satisfactory under the conditions

prevailing in the industry, when other milk recording organisations and the majority of agricultural societies or associations were unable to maintain their former membership.

The following is a list of the milk recording societies which operated in 1935, with the name and address of the Secretary of each society :—

Name of the Society.	Secretary.
Central and South Ayrshire (6 Circuits)	Mr E. A. Bell, M.A., B.Sc., 13 Alloway Street, Ayr.
Central Ayrshire No. 2 .	Mr James Caldwell, Moorfield, Kilmarnock.
Central Scotland (5 Circuits)	Mr Arthur Gilmour, C.A., 23 Silvergrove Street, Glasgow.
Dumbartonshire . . .	Mr Robert Bilsland, Quay Place, Dumbarton.
Dumfriesshire (3 Circuits)	Mr Thomas Henderson, Solicitor, Lockerbie.
East Lothian and Border	Mr James L. Nisbet, Easter Newton, Kirknewton.
Fife (2 Circuits) . .	Mr D. B. MacKenzie, Commercial Bank, Thornton.
Highland . . . . .	Mr J. M. Hunter, Queensgate, Inverness.
Kintyre . . . . .	Mr Robert Young, Drum, Kilkenzie.
Lesmahagow . . . . .	Mr James Hamilton, Auldtoun, Lesmahagow.
Lower Wigtownshire .	Mr William Christison, Barglass, Kirkcinner.
North Ayrshire (John Speir) (3 Circuits)	Mr John W. Goudie, Union Bank, Kilmarnock.
North of Scotland (3 Circuits)	Mr James W. Mathewson, 13 Hutchison Terrace, Aberdeen.
Renfrew and Bute (2 Circuits)	Mr Thomas Hunter, Solicitor, 35 High Street, Paisley.
Renfrewshire (Upper Ward)	Mr William Henderson, Crookston, Newton Mearns.
Rhins of Galloway (4 Circuits)	Mr W. Brown Moir, 8 Bridge Street, Stranraer.
Stewartry of Kirkcubright (5 Circuits)	Mr Patrick Gifford, Solicitor, Castle Douglas.

### SEASON 1935.

The following table shows for each society or circuit the number of herds, the number of cows tested, the average interval between the tests, and the duration of the recording season :—

[TABLE

Name of the Society or Circuit.	No of Herds.	No. of Cows Tested	Average interval between Tests, in Days.	Duration of Re-cording season, in Weeks.
Central and South Ayrshire—				
1. Ayr and Troon . . . .	16	581	21	52
2. Cumnock and District . . . .	17	557	21	52
3. Girvan and District . . . .	17	845	21	52
4. Kilmarnock and District . . . .	17	651	21	52
5. Mauchline and Drongan . . . .	17	560	21	52
6. Maybole and District . . . .	17	747	21	52
7. Central Ayrshire No. 2 . . . .	19	729	24	52
Central Scotland—				
8. Carlisle and District . . . .	19	706	25	52
9. Dunblane and District . . . .	19	706	25	52
10. East Kilbride and District . . . .	20	770	26	52
11. Falkirk and Linlithgow . . . .	23	763	28	52
12. Strathendrick . . . .	17	883	25	52
13. Dumbartonshire . . . .	22	824	27	52
Dumfriesshire—				
14. Mid Annandale . . . .	21	895	27	52
15. Upper Annandale . . . .	20	982	26	52
16. Upper Nithsdale . . . .	21	946	27	52
17. East Lothian and Border . . . .	18	861	25	52
Fife—				
18. Dunfermline and Kirkcaldy . . . .	19	689	25	52
19. Cupar-Fife and Perth . . . .	23	725	28	52
20. Highland . . . .	20	684	28	52
21. Kintyre . . . .	10	461	28	52
22. Lesmahagow . . . .	22	695	28	52
23. Lower Wigtownshire . . . .	21	1151	28	52
North Ayrshire (John Speir)—				
24. Fenwick . . . .	21	947	27	52
25. 'John Speir' . . . .	22	722	28	52
26. Stewarton and Montgomerie . . . .	21	902	27	52
North of Scotland—				
27. Forfarshire and Kincardineshire . . . .	18	737	26	52
28. Aberdeen and District No. 1 . . . .	18	902	26	52
29. Aberdeen and District No. 2 . . . .	19	765	28	52
Renfrew and Bute—				
30. Bute and Inverkip . . . .	22	693	28	52
31. Paisley and Kilmacollm . . . .	17	682	23	52
32. Renfrewshire (Upper Ward) . . . .	13	652	28	52
Rhins of Galloway—				
33. Kirkcolum and District . . . .	19	1418	27	52
34. Kirkmaiden and District . . . .	15	1441	28	52
35. Luce Valley . . . .	19	1225	27	52
36. Strauraer and District . . . .	17	1216	27	52
Stewartry of Kirkcudbright—				
37. Dalbeattie and New Abbey . . . .	18	888	24	52
38. Castle Douglas & New Galloway . . . .	20	1091	27	52
39. Castle Douglas and District . . . .	18	980	24	52
40. Kirkcudbright and District . . . .	19	1156	25	52
41. Borgue, Twynholm & Gatehouse . . . .	19	1044	25	52
Total No. . . .	770	34,872	...	...

## DEFINITIONS.

The milk records compiled by the Association are records of the estimated quantity of milk produced by each cow in a separate lactation, and of the estimated percentage of milk fat contained in the milk. For convenience a gallon of milk is reckoned as 10 lb. A gallon of milk of average quality weighs almost exactly 10½ lb. The following further particulars concerning each record were also given wherever possible :—

Name of cow, byre number, and herd-book number.  
Sire of cow and herd-book number of sire.  
Dam of cow and herd-book number of dam.  
Date of birth.  
Date of calving preceding opening of record.  
Number of weeks in milk.  
Date of calving after record closed.

The following particulars of the preceding record were appended to each record, where available :—

Date of calving preceding opening of record.  
Quantity of milk in gallons.  
Percentage of fat in milk.  
Number of weeks in milk.

The milk yields were estimated in respect of quantity and milk-fat percentage from the results of systematic periodic tests by trained recorders approved by the Association. The recorders visited the farms for this purpose at intervals varying from twenty-one to twenty-eight days, and each day of visit was regarded as the middle day of the period covered by the visit. Milk records estimated in this way approximate closely to the actual milk yields.

## METHOD OF RECORDING—OFFICIAL RECORDS.

A distinctive feature of milk recording in Scotland in 1935, as in former years, was that the official records were entirely the work of trained official recorders. Recorders had previously to undergo a special course of training in milk recording at the West of Scotland Agricultural College, or other approved College of Agriculture. Only candidates of good character and good general education were selected to attend these courses ; and all recorders, before appointment, were approved by the Executive Committee of the Association.

All dairy farmers taking advantage of the Association's scheme were arranged into Local Milk Recording Societies



employing one or more recorders, the Executive Committee having the power to transfer members from one local society to another, in order to find accommodation for new applicants, and at the same time avoid overlapping of recorders' circuits. Each local society applying to the Association for licence to conduct milk recording under the Association's scheme signed the form containing the Association's rules and regulations, and agreed to conform to these rules. The local society selected and appointed their recorder or recorders from the list of approved recorders obtained from the Association. Apparatus, chemicals, sheets, and books were selected and arranged for by the Association, all byre sheets and record books used by the recorders being supplied free of charge. Thus uniformity of method was, as far as possible, assured.

The official recorder visited each herd at intervals of not more than twenty-eight days, or more usually from twenty to twenty-five days. He, or she, arrived at the farm in the afternoon, usually by means of a small pony and trap provided by the local society for the purpose, and was accommodated at the farm overnight. All cows giving milk in each herd, as far as was possible, were included in the records. Each cow was clearly distinguished in the byre by a stall number on the wall, immediately in front of, and above the level of the cow, and registered animals were also indelibly tattooed on the ears with distinctive registered tattoo markings. The cows were milked in the same rotation, evening and morning, on the occasion of the recorder's visit. The recorder weighed and sampled the milk of each cow in the evening, noting the time at which each cow was milked, and entered the results in the corresponding columns in the byre sheet, taking up a position in the byre as near to the milkers as possible, so as to have them in full view, and as far as practicable receiving the milk direct from the milker at the cow's side. He again weighed and sampled the milk of each cow in a similar manner in the morning, and entered the results in the byre sheets. He then tested the mixed evening and morning sample for each cow by the Gerber method for percentage of milk fat. He entered in the byre sheet any unusual conditions likely to affect the milk yields. The recorder was required to see that all milk samples and byre sheets were securely locked up overnight or during his absence. From the daily results the recorder calculated and completed the byre sheets, multiplying the yields by the exact number of days which had elapsed since the last test, but so calculating throughout that each day or visit was regarded as the middle day of the period covered by the test. Special ready reckoners were used to facilitate calculating and to ensure greater accuracy.

The byre sheets were written out in duplicate. The prin-

cial copies were posted at regular intervals to the office of the Association, and the second copies left with the respective members. The recorder transferred the results from the extended byre sheets to the milk record book for the herd indelibly in ink, each cow being assigned a separate page, at the top of which full particulars of the cow were entered, including the indelible tattoo marks on the animal.

The byre sheets were carefully revised and corrected in the Association's office during the season, and a list of the necessary corrections sent to each recorder periodically to be entered in the record books.

Visits of inspection were made to each recorder and to the members of local societies at the different farms periodically throughout the year by members of the Association's staff, and reports thereon submitted to the Executive Committee. The Executive Committee reserved the right to withdraw approval of any recorder at any time, or to limit the period of service of any recorder with any particular society. Members of local societies refusing to observe any of the rules of the Association, or deemed to be guilty of conduct injurious to the true interests of milk recording, were liable to be temporarily or permanently suspended.

Another distinctive feature was the surprise check tests, the records of each herd being checked in this way about two times throughout the year. The recorder was instructed, by a letter from the superintendent on a date unknown to recorder and owner of herd, to remain at the same farm another day and make another complete twenty-four hours' test. The surprise test results were entered on special buff-coloured byre sheets, and in the record books in red ink immediately below the results of the regular test of the previous day. The buff byre sheets were posted to the Association's office with the other sheets, and any abnormal differences were immediately noted and were reported to the Executive Committee.

As a result of this system of surprise check tests, each page of the 1935 milk record books contains entries in red, comparison of which with the immediately preceding entries provides valuable evidence as to the genuineness of the milk records.

In addition to the surprise check tests made by the recorder, a number of independent surprise tests were made by the Association's staff in order to check the recorder's work.

All records were closed at the end of December, the current lactations being carried forward to the new books of the following year. Finally, summary sheets were written out in duplicate showing the total milk yields for each cow for the lactation or part lactation, with full particulars of the cow, dates of calving, &c. The principal copy of the summary

sheet was posted to the Association's office with the record book, and the second copy left with the owner of the herd.

All record books and summary sheets were carefully revised, corrected in detail, and initialled in the Association's office during the next few months, the record books being returned later to the respective members, and the summary sheets retained and bound for future reference.

The milk records were next classified into three groups for cows and heifers respectively on the following basis. Experience has confirmed the view that a very useful comparison is obtained by reckoning the yields at their estimated equivalent of milk of 1 per cent fat. Such a comparison takes into consideration both the quantity and the quality of the milk.

Cows with a milk record equivalent to not less than 2800 gallons at 1 per cent fat, and heifers with a milk record equivalent to not less than 2240 gallons at 1 per cent fat, were grouped into Class I. Cows and heifers with milk records of less than two-thirds of these amounts—viz., 1860 and 1490 gallons respectively—were grouped into Class III.

The following short table shows the corresponding values of these yields in fairly good milk of 3·5 per cent milk fat :—

Class.	Yield in Milk of 1 per cent Fat. (Gallons.)	Corresponding Yield in Milk of 3·5 per cent Fat. (Gallons.)
Cows in Class I. . .	Not less than 2800 . .	800
Heifers in Class I. . .	Not less than 2240 . .	640
Cows in Class III. . .	Less than 1860 . .	531
Heifers in Class III. . .	Less than 1490 . .	426

All cows and heifers with milk yields falling between these limits would come into Class II. Such animals naturally claim less attention than the good milkers or the obviously unprofitable animals. It should be noted, however, that Class II. would include a certain number of unclassifiable yields, as there were a number of cases where, from various causes, the results of a whole normal lactation could not be obtained.

It should be noted that while the above standards for classification of milk yields are the same as for 1934, they are higher than those formerly adopted, in the proportion of 2800 gallons at 1 per cent fat for a Class I. cow to the former standard of 2500 gallons, the other standards bearing the same relation as formerly to the cow Class I. standard. This decision of the Executive Committee brings the Class I. standard for cows and heifers respectively into line with those adopted since 1924 for the Association's Annual Register of

**High-yielding Cows.** This subject was dealt with more fully in last year's report under "General Review."

The Association will shortly publish an annual report giving fuller details of the work of the Association and of each local milk recording society during 1935. This report will include tables showing for each farm the number of cows and heifers tested and the number and percentage included in Classes I. and III. respectively. Each herd is included under the respective local society, but is represented only by an alphabetical letter, the owner being advised privately of the identity in the report of his own herd or herds. From these tables any member may see how his herd compares with other herds in the same or any other district, and the improvement in his own herd compared with previous years. The report will also show in tabular form the percentage of Class I. and of Class III. animals of all animals tested under the Association's scheme during the year, by both the former and the new classification standards, and will thus afford a valuable indication of the progress in milk production generally in recorded herds.

An important feature of the Association's annual reports, from 1917 inclusive, is the register of good milking cows with the names and addresses of owners and full particulars of the milk records. This register includes only the records of animals with a milk yield equivalent to not less than 2800 gallons containing 1 per cent of milk fat in the case of a cow, and 2240 gallons containing 1 per cent of milk fat in the case of a heifer, and is further restricted to animals which completed their lactations before the end of the year and gave birth to another calf before 1st May 1936. Full particulars of each record are given, and all lists of records are submitted to the owners of the respective animals for revision before publication. The register is of great value to all interested in improved milk production and in the breeding and rearing of animals of the best milking strains, and is invaluable for reference.

It should always be kept in mind when making a comparison of cows in different herds or in different districts that the different methods of dairying practised have a considerable influence on the milk yields, and that therefore milk yields alone do not necessarily indicate the true relative inherent or hereditary milking qualities of the animal. But the authenticated milk records compiled by the Association are of inestimable value to breeders and owners of dairy cows if properly interpreted.

#### REVIEW OF 1935—OFFICIAL RECORDS.

Recording was carried on in 1935 by 41 local societies or circuits, comprising 770 members. The number of cows tested in 1935 was 34,872, compared with 32,905 in 1934,

and was the largest number officially tested in the history of the Association.

The percentage of dairy cows officially recorded in Scotland compares favourably with that of other countries. With the exception of Denmark, where milk recording was introduced earlier than in Scotland and conditions prevail more favourable to movements on a co-operative basis, Scotland contains a higher proportion of officially recorded dairy cows than any other country.

During the year 13 recorders, for various reasons, terminated their engagements. The Executive Committee, however, in the same period approved of 29 applicants for the position of milk recorder, and were able to recommend a sufficient number of qualified recorders. Five women recorders were employed in 1935 and 47 men recorders. In this connection the Committee are indebted to the West of Scotland Agricultural College for giving special courses of instruction for milk recorders to meet the Association's requirements. Only one special course was required in 1935—namely, in December. Thirty selected candidates attended the course, and 29 obtained the certificate.

The Executive Committee purchased the supplies of milk-testing apparatus, sulphuric acid, and amylie alcohol for local societies, as in previous years.

The system of surprise check tests, introduced in 1920, was continued in 1935. The total number of check tests made by recorders during the season was 1115. In no instance in 1935 was the average milk yield for the herd more than 3 lb. milk daily less on the occasion of a check test as compared with the previous day. Only 2 herds showed an average of over 2 lb. less. In addition to the surprise tests arranged for and carried out by the recorders, the Assistant Superintendent made 45 special check tests of different herds. The results in most instances agreed very closely in regard both to average milk yields and fat percentages with those of the recorders' previous tests. Only 1 herd showed an average daily yield of over 2 lb. less on the occasion of a special check test, and no herd had an average of over 2 lb. more. With regard to average fat percentages, only 1 herd showed an average fat percentage of over .2 per cent lower, and 1 herd an average of over .2 per cent higher. With the exception of 2 herds, the average fat percentages were all within .2 of those obtained by the recorders at the previous tests.

With regard to the general conditions for milk production in 1935, the weather during most of April was unfavourable. East wind and drought prevailed during May, and pastures and crops suffered from lack of moisture. Frost of unusual severity occurred in the middle of the month, and vegetation of all kinds suffered a severe check. The first half of June

was wet and cold, but warmer weather during the latter half enabled plants to make rapid growth. July was generally dry, sunny, and warm, and these conditions continued until the last week of August, when a general rainfall delayed harvesting operations. Broken weather continued in September, and roots and pastures benefited. During October conditions were generally wet and stormy.

The cold and dry conditions in the earlier part of the season retarded the growth of grasses and clovers. Ideal weather in most districts favoured the securing of the hay, which was of excellent quality, although less in bulk than usual. During the summer pastures for a time became very dry and bare, and dairy cows suffered from the scarcity of grass. Pastures improved, however, with later rains, and dairy cows generally maintained their condition in the autumn. Turnips and swedes by the end of June were making vigorous growth. Early sown crops maintained steady progress, but on account of the excessive summer drought crops sown later were below normal growth in many districts. Turnips and swedes benefited greatly from the coming of rain in the late summer and autumn. Taken on the whole, the year was not favourable for high milk yields; and it may be assumed that the average milk yield per cow in Scotland in 1935 was considerably below average.

Prices generally for milk and milk products remained low relative to costs of production. From the financial point of view the year was far from satisfactory, and the cumulative effect of the previous fourteen years of depression was still being severely felt.

In the case of recorded herds, other conditions militated against a higher average yield. As in recent years, a considerable proportion of herds which had been recorded for a period of years were entirely dispersed, or for other reasons already referred to did not continue to be recorded, while a considerable number of 'new herds,' or herds tested for not more than three years, were included. The proportion of regular milk record herds was thereby correspondingly reduced.

The following table shows for each society or circuit the number and percentage of cows and heifers of each class in 1935 :—

[TABLE

Society or Circuit.	Cows and Heifers				
	Number.			Per Cent.	
	Total.	Class I.	Class III.	Class I.	Class III.
Central and South Ayrshire—					
1. Ayr and Troon . . . .	581	418	12	74	2*
2. Cumnock and District . .	557	468	2	85	...*
3. Girvan and District . . .	845	479	42	57	5
4. Kilmarnock and District . .	651	533	...	87	...*
5. Mauchline and Drongan . .	560	399	9	74	2*
6. Maybole and District . . .	747	577	12	77	2
7. Central Ayrshire No. 2 . .	729	638	1	90	..*
Central Scotland—					
8. Carlisle and District . . .	706	508	23	72	3
9. Dunblane and District . . .	706	438	29	62	4
10. East Kilbride and District .	770	482	7	70	1*
11. Falkirk and Linlithgow . .	763	404	31	60	5*
12. Strathendrick . . . . .	883	562	19	65	2*
13. Dumbartonshire . . . . .	824	489	7	68	1*
Dumfriesshire—					
14. Mid Annandale . . . . .	895	544	15	62	2*
15. Upper Annandale . . . . .	982	659	29	67	3
16. Upper Nithsdale . . . . .	946	632	17	68	2*
17. East Lothian and Border . .	861	561	46	66	5*
Fife—					
18. Dunfermline and Kirkcaldy .	689	476	16	69	2
19. Cupar-Fife and Perth . . .	725	480	27	67	4*
20. Highland . . . . .	684	389	11	59	2*
21. Kintyre . . . . .	461	239	7	65	2*
22. Lesmahagow . . . . .	695	515	12	76	2*
23. Lower Wigtownshire . . . .	1151	440	77	38	7*
North Ayrshire (John Spier)—					
24. Fenwick . . . . .	947	726	10	77	1
25. 'John Spier' . . . . .	722	472	12	67	2*
26. Stewarton and Montgomerie .	902	611	22	68	2
North of Scotland—					
27. Forfarshire and Kincardineshire . . . . .	737	540	...	76	...*
28. Aberdeen and District No. 1 .	902	330	35	49	5*
29. Aberdeen and District No. 2 .	765	486	26	64	3
Renfrew and Bute—					
30. Bute and Inverkip . . . . .	693	443	18	64	3
31. Paisley and Kilmacolm . . .	682	487	5	71	1
32. Renfrewshire (Upper Ward) .	652	448	11	69	2
Rhins of Galloway—					
33. Kirkcubbin and District . .	1418	637	53	50	4*
34. Kirkmaiden and District . .	1441	600	69	42	5
35. Luce Valley . . . . .	1225	426	134	35	11
36. Stranraer and District . . .	1216	543	64	45	5

Society or Circuit.	Cows and Heifers.				
	Number.			Per Cent.	
	Total.	Class I.	Class III.	Class I.	Class III.
Stewartry of Kirkcudbright—					
37. Dalbeattie and New Abbey	888	508	30	57	3
38. Castle Douglas and New Galloway . . . . .	1091	636	36	59	3*
39. Castle Douglas and District	980	316	127	32	13
40. Kirkcudbright and District	1156	554	35	48	3
41. Borge, Twynholm and Gatehouse . . . . .	1044	474	62	46	6*
Of all the cows and heifers tested in 1935	34,872	20,567	1200	61	3½*
Comparison with 1934 .	32,905	20,164	998	63	3*

\* Excluding herds tested during only a part of the recording season—1038 cows in 1935.

Reviewing the results of the 41 circuits as a whole, we find that, classifying on the new higher standards, of the total of cows and heifers tested in 1935, excluding 1038 animals in herds tested during only a part of the season, and therefore not classified, 20,567 were included in Class I. and 1200 in Class III. This is equivalent to 61 per cent in Class I. and 3½ per cent in Class III. Thus, 61 per cent of all the cows and heifers tested gave a milk yield equivalent to not less than 800 gallons containing 3·5 per cent milk fat in the case of a cow and 640 gallons in the case of a heifer; while only 3½ per cent gave a milk yield equivalent to less than 531 gallons containing 3·5 per cent milk fat in the case of a cow and 426 gallons in the case of a heifer.

The following table shows a comparison of the average results from 1914 to 1935 inclusive. For this comparison the 1935 milk records have been specially classified on the lower standards adopted in previous years :—

[TABLE



Year	Cows and Heifers.		
	Total Number Tested	Per Cent	
		Class I	Class III
1935	34,872	73	2
1934	32,905	75 $\frac{1}{2}$	1 $\frac{1}{2}$
1933	32,456	75	1 $\frac{1}{4}$
1932	31,415	72 $\frac{1}{2}$	1 $\frac{1}{2}$
1931	30,576	72 $\frac{1}{4}$	1 $\frac{1}{2}$
1930	30,720	70	1 $\frac{1}{4}$
1929	30,898	69	1 $\frac{1}{4}$
1928	30,293	66	2 $\frac{1}{2}$
1927	29,459	65 $\frac{3}{4}$	2 $\frac{3}{4}$
1926	29,236	65 $\frac{3}{4}$	2 $\frac{3}{4}$
1925	28,410	60	5
1924	27,967	65	3
1923	26,952	65	2
1922	27,275	63	2
1921	26,752	58 $\frac{3}{4}$	4
1920	24,191	55 $\frac{1}{4}$	3 $\frac{1}{4}$
1919	20,786	49 $\frac{3}{4}$	4 $\frac{1}{2}$
1918	17,827	49	5 $\frac{1}{2}$
1917	19,564	50	4 $\frac{1}{2}$
1916	23,702	53 $\frac{1}{4}$	4 $\frac{3}{4}$
1915	26,572	46	6
1914	26,424	39 $\frac{1}{2}$	9

We observe that when classified on the lower standards of 1933 and previous years, 73 per cent were included in Class I. and only 2 per cent in Class III. In 1934, 75 $\frac{1}{2}$  per cent were eligible for Class I. and 1 $\frac{1}{2}$  per cent were included in Class III.

The average standard attained in 1935 was undoubtedly lowered by the inclusion of the larger proportion of 'new herds' and by the adverse weather and other conditions already referred to, yet it will be observed from the preceding table that the proportion of animals qualifying for inclusion in Class I. on the lower standards in 1935 is only 2 $\frac{1}{4}$  per cent lower than that of 1934—namely, 75 $\frac{1}{2}$  per cent, which is the highest reached since the commencement of official milk recording thirty-two years ago.

The majority of regular milk record herds in Scotland have been gradually graded up to a higher natural capacity for production, and with adequate feeding and otherwise favourable conditions they are capable of producing still higher yields.

It will be observed also that the proportion of Class I. cows and heifers to the total animals tested has increased

from 39½ per cent in 1914 to 75½ per cent in 1934, while the proportion of Class III., or obviously unprofitable, animals has been reduced in the same period from 9 per cent to 1½ per cent. These figures indicate great improvement in recorded herds, yet do not represent the full extent of the progress made since the introduction of milk recording in 1903. It is estimated that milk record herds generally are at the present time giving higher average yields than unrecorded herds to the extent of considerably over 200 gallons per cow per annum.

Improvement from milk recording is not confined to herds officially recorded in 1935. A very much larger number have been tested and recorded for longer or shorter periods since the Association's scheme of milk recording was introduced. And when we consider the spread or diffusion of the benefits arising directly or indirectly from milk recording, we find that these penetrate widely in various directions other than that of individual members of milk recording societies. For example, there is the effect on the remaining dairy herds of the country. The wide dissemination annually of milk record stock bulls and milk record cows for breeding purposes among untested herds alone must exercise an incalculable improving influence on a very large number of these herds. Such influence is increasing with the extension of the practice of using only milk record bulls in dairy herds.

There is also the powerful educational influence and force of example permeating and leavening the whole mass of dairy farmers, and gradually creating a new habit of thought in the realm of milk production. If a census could be taken in this connection, it would probably be found that a considerable proportion of herd owners outside the membership of milk recording societies are in one way or another testing and recording the milk yields of their herds who would never have done so had systematic or official milk recording not been in operation. The same consideration applies to the more enlightened methods of selecting, breeding, and feeding on milk record lines which have been adopted in many herds not officially recorded.

There is another direction in which advantage from milk recording is penetrating widely beyond the ranks of milk recording societies. Increased efficiency in the production of milk lowers the cost to the urban populations, and some portion of the return from milk recording is handed on beyond the actual milk producers.

There remains a still wider aspect of the question. Large numbers of milk record bulls and young cows are exported annually, and go to maintain and improve the milking qualities of the dairy herds of the Empire.

The Association's activities are not confined to the official

testing and recording of the individual milk yields, but are directed also to assisting the herd owners to improve their methods of production by means of the records obtained. The work is to some extent of an educative or advisory nature. Official recorders have to attend a course of instruction which includes the feeding and general management of the dairy herd, and are required to do all they can to interest and advise members in this connection. The Association have prepared and issued to all members a concise practical guide to feeding of dairy cows, containing a table of fifteen selected food mixtures adapted to different conditions, and recorders and central staff take every opportunity of assisting members to follow the instructions given therein.

#### SCHEME OF PRIVATE OR UNOFFICIAL MILK RECORDS.

The Association's scheme of private or unofficial milk records, inaugurated in 1924, was continued in 1935 on the same lines as in previous years. The chief objects are to establish milk recording on a wider and more popular basis, and to induce a greater number ultimately to adopt the system of official authenticated milk records.

Milk recording under this scheme was administered directly by the Association. The following inducements were offered to members :—

- (a) The hire of a set of appliances for testing purposes free of annual charge, the member to upkeep the apparatus in good condition.
- (b) Byre sheets and record books free of charge, with stamped addressed envelopes for return of byre sheets.
- (c) All calculations in byre sheets and record books to be made in the Superintendent's office, and the sheets and record books to be returned to the herd owners duly extended and completed.
- (d) The total charge on members to be limited to an annual subscription to the Association at the rate of 1s. per cow tested.

Twelve new members were enrolled for 1935. Six of the members were transferred to the scheme of official recording. The total membership for 1935 was 91, and the total number of cows included 2123. This new scheme of recording had in 1935 been the means of obtaining for official recording 51 new members of a very desirable type, which is one of the objects for which it was promoted.

There are several reasons why the membership under this

scheme has not increased more rapidly. The better milking herds are gradually transferred to official records. Further transfers have been arranged for season 1936. At the other extremity there are a considerable proportion of poor herds, the owners of which are evidently unduly discouraged by the low yields recorded, and apparently have not the mentality to appreciate the possibilities of effecting the much-needed improvement. Also, a number of members, after two or three years' experience, believe they can carry on recording on similar lines independently at smaller cost.

This scheme of unofficial recording is serving a useful purpose. For reasons already given, its effect must not be measured merely by the number of herds included in any particular year; account must be taken of its educational influence and propaganda value. Thus a considerable proportion of the members who have withdrawn, and meantime severed their connection with the Association, have acquired the milk recording point of view, and ought ultimately to be found among members of milk recording societies. No fewer than 412 herd owners have been initiated in milk recording through its operation.

The following is a brief outline of the method of recording adopted :—

All cows in the herd yielding milk must be included in the record. Each cow must be clearly distinguished in the byre by a stall number on the wall. On the occasion of a test the cows must be milked in the same rotation evening and morning, and care must be taken that the milk of each cow for twenty-four hours, and for twenty-four hours only, is included in the test. The owner, or his agent, is required to weigh the milk of each cow evening and next morning by means of the spring balance and pail provided, once every twenty-one to twenty-eight days, and to enter the results and other necessary particulars in the byre sheet provided by the Association; and each byre sheet must be signed by the owner, or on his behalf, as correct in respect of all entries made. The byre sheet is sent by first post to the Superintendent, and calculated and extended by the Association's staff, and returned to the owner as soon as completed. A milk record book for each herd is written out in the Association's office. The record books are closed at the end of the recording season as at 30th November, and the results summarised and entered in special summary sheets. The record books and copies of the summary sheets, when completed and checked, are sent to the respective owners of the herds.

It must, of course, be clearly understood that the milk records compiled under this scheme are purely unofficial unauthenticated records, and have no connection with the official authenticated milk records of the Association. But

from letters received and opinions expressed by members, it is evident that very useful guidance may be obtained from the records.

#### PROSPECTS FOR 1936.

Propaganda on an extensive scale is carried through each year. Applications for membership, or for further particulars, are invited through press advertisements, articles, circular letters, broadcast talks, bills posted at auction marts, &c. All members of the Association, members of local milk recording societies, members under the scheme of unofficial records, and milk recorders are requested individually to assist in obtaining new members for either scheme in their respective districts, and to send to the Superintendent the names and addresses of local dairy farmers likely to be interested. In this way a comprehensive propaganda list of possible new members is compiled. To each address on this list are sent circular letters and propaganda literature giving particulars of both systems of recording and enumerating the advantages to be obtained, and a form of application. Following on the distribution of literature, personal visits are made to most of the farms by the Association's staff, and the herd owners are classified into three groups according to the degree of probability of their becoming members. Wherever any particular interest is shown, the visit is repeated until a definite decision is reached. By this method, continued over a number of years, dairy farmers who were formerly quite indifferent have been enrolled as new members.

Similar efforts were made to obtain additional applications for membership of local societies in 1936. With the scheme of private or unofficial milk records in operation, it was possible to carry out propaganda work for both schemes simultaneously, and over 2000 circular and other letters, with propaganda literature, were distributed to dairy herd owners throughout Scotland. In addition, 1224 personal visits were made. But as a result of the severe depression in dairy farming, which has existed now for fifteen years, herd owners were seeking to cut down expenditure in every possible direction, and there was the greatest difficulty in persuading many of them to adopt any new scheme entailing the slightest additional expenditure. The number of new members for official records for season 1936 obtained to date is 66, and a considerable number of prospective new members for the year following have also been obtained. If only conditions generally in the dairying industry were more favourable, there would be every reason to expect a considerable increase in membership of milk recording societies in the immediate future.

All the local societies of 1935 have continued. The number

of recorders' circuits in 1936 is 41, the same number as in the previous year. The total number of herds and of cows officially tested will show an increase.

The Committee are in a position to recommend a sufficient number of qualified recorders. All vacancies at the beginning of the year have been filled, and there remain a number of approved recorders on the waiting list. The Committee have arranged for supplies of sulphuric acid, amylic alcohol, and milk testing apparatus for local societies in 1936.

With regard to unofficial records, 9 new members have been enrolled. Six of the members have been transferred to the scheme of official recording for season 1936, making a total of 57 transferred. The total membership for unofficial recording at present is 81, with approximately 1864 cows.

#### GENERAL REVIEW.

Under this heading last year we referred to the vexed question among a section of our members of variations in milk-fat percentages. The Association have been fortunate in obtaining for their forthcoming Annual Report a special article by Dr A. C. Mc'Candlish dealing with causes of variation in the quality of milk as obtained direct from the cows at the farm, which should be of particular interest to all milk producers. The substance of this article is given in the succeeding paragraphs.

Legally milk must contain 3 per cent of butter-fat, while for Certified and Grade A milks a minimum standard of 3·5 per cent fat has been set. In addition, to meet the requirements of the Scottish Milk Marketing Board, milk must contain at least 3·4 per cent of fat in summer and 3·5 per cent in winter. It can be seen, therefore, that for all practical purposes the required butter-fat standard for milk in Scotland is 3·5 per cent.

In milk recording the two most important items to be determined are the yield of milk and the percentage of fat present. Their importance lies in the fact that together they determine the value of the produce of the individual cows, while the fat percentage indicates, in part, whether or not the milk meets legal and market requirements. Consequently a knowledge of the variations to which the fat content of milk is subject is of value.

As an illustration of some of the variations in the fat content of milk, the fat percentages found in the milks of 8 individual cows during a part of 1935 have been set out in Table I. A look at this table shows that there are considerable variations in the fat percentages for the individual cows at the various tests, and that these variations are not by any means

uniform in amount or direction. The cows do not all show their highest or lowest test at any given time.

Then if the retest on 14th June be compared with the test of the previous day, it is found that while 2 cows show no variation in butter-fat percentage, 2 show increases of .1 per cent and .7 per cent, while the others show decreases ranging from .2 to .9 per cent. Why do such variations occur?

TABLE I.—SOME VARIATIONS IN FAT PERCENTAGE.

Date.	Cow No.							
	1	2	3	7	8	14	17	57
	Fat Percentage.							
April 15 . .	4.0	3.7	4.2	3.3	3.4	4.2	3.8	3.7
May 4 . .	3.9	3.8	4.0	3.7	3.9	3.7	4.2	3.6
„ 25 . .	4.1	3.9	4.3	3.4	4.4	4.5	3.0	3.9
June 13 . .	4.0	3.9	5.0	3.5	3.9	5.4	3.9	3.8
„ 14 . .	4.0	4.0	4.6	3.5	3.4	4.5	3.7	4.5
July 4 . .	4.1	3.7	4.5	3.5	3.7	4.7	4.1	4.2

Many factors are known to bring about changes in the fat content of milk, and there are probably others which are not yet known. Some known factors will now be discussed, and the data used to illustrate them will be taken, as far as possible, from the data of the Scottish Milk Records Association and the work of the West of Scotland Agricultural College.

### 1. BREED.

It is perhaps invidious to make breed comparisons, though the breed of the animal is generally mentioned as one of the factors controlling the percentage of fat in the milk. It may, however, be of less importance than is frequently believed.

In Scotland the only two breeds of importance so far as dairying is concerned are the Ayrshire and the Friesian. The milk of the Ayrshire breed, on the average, has a higher fat content than that of the Friesian, but both are well below the average for either of the Channel Islands breeds.

A considerable number of Guernseys have been introduced into dairy herds in certain sections of Scotland during recent years. This has not been done solely on account of the high fat content of Guernsey milk, but rather on account of its high colour.

Many feeds, particularly grass, contain yellow pigment.

Some of this pigment passes into the milk in association with the butter-fat, and so gives it a 'rich' yellow colour. Part of the pigment can also be stored in the body fat, to be later passed on into the milk fat during a period of shortage of pigment in the feed.

The Guernsey breed can make greater use of this pigment, pass more of it on to the butter-fat, and store greater quantities of it in the body than can any other breed. Hence the high colour of Guernsey milk. However, the Guernsey cannot make the pigment. If she is kept for a sufficient length of time on a ration low in pigment, she will yield milk of the same colour as that of the other breeds.

## 2. INDIVIDUALITY.

Of greater importance than the breed, so far as the fat content of the milk is concerned, is the individuality of the animal. From the last Annual Report of the Scottish Milk Records Association three Ayrshire and three Friesian herds have been taken at random. The highest and lowest fat percentages for a lactation have been taken from each herd, and are given in Table II.

TABLE II.—INDIVIDUAL VARIATIONS IN FAT PERCENTAGE.

Breed.	Herd.	Minimum.	Maximum.
		Per cent.	Per cent.
Ayrshire . . .	A	3.57	4.61
	B	3.48	4.16
	C	3.24	4.51
	Average	3.43	4.43
Friesian . . .	D	3.40	4.70
	E	3.20	4.11
	F	3.09	4.51
	Average	3.23	4.44

From this it can be seen that the Ayrshire minima range from 3.24 to 3.57 per cent and maxima from 4.16 to 4.61 per cent, while the Friesian minima run from 3.09 to 3.40 per cent and maxima from 4.11 to 4.70 per cent. The averages for the low tests are 3.43 per cent for the Ayrshire and 3.23 per cent for the Friesians, while those for the high tests are 4.43 per cent for the Ayrshires and 4.44 per cent for the Friesians.

Here the highest test is for a Friesian, though generally the reverse would be found. However, the most important point



of all is that the difference between the lowest and highest Ayrshires is 1.37 per cent, and between the lowest and highest Friesians 1.61 per cent, while the difference between the lowest Ayrshire and the lowest Friesian is only .15 per cent, and between the highest Ayrshire and the highest Friesian only .09 per cent. Then the difference between the average for the low Ayrshires and that for the low Friesians is only .20 per cent, and between the averages for the high testing groups only .01 per cent.

The individuals within the breeds show greater differences in fat percentage than there is between the averages for the breeds. If a larger number of cases had been taken even more marked results would have been obtained. The individuality of the animal is of greater importance than breed in determining the fat content of milk.

### 3. AGE.

The influence of age on the fat content of milk can be seen from the results obtained by Kay and M'Candlish [6] in a study of 4380 lactation records for 738 Ayrshire cows taken from herds tested by the Scottish Milk Records Association.

TABLE III.—VARIATION IN FAT CONTENT WITH AGE.  
(Kay and M'Candlish [6].)

Age.		Fat	
Years.	Per cent.	Years.	Per cent
3 . . .	3.87	9	3.73
4 . . .	3.76	10	3.76
5 . . .	3.77	11	3.71
6 . . .	3.74	12	3.23
7 . . .	3.75	13	3.45
8 . . .	3.76	Average	3.77

The average fat content for all animals at all ages was 3.77 per cent, and the most notable variation was that it dropped from 3.87 per cent in the first lactation at around three years of age to 3.76 per cent at four years. From then to eleven years of age it stayed between 3.71 and 3.77 per cent, but at the higher ages there was again a marked drop.

Heifers give a higher fat percentage in their first lactation as a rule than they do at any time in later life—provided other conditions are equal. Age is unlikely to have any very detrimental effect on the fat content of the milk except in

the case of very old cows, which may give milk dangerously low in fat.

Where an effort is being made to breed for a high butter-fat content selection can to a certain extent be made after the first lactations of the heifers. Those which have a low butter-fat percentage in their first lactation cannot be expected to give a high percentage in later life—if already they have been properly fed and managed.

#### 4. STAGE OF LACTATION.

It is generally believed that in a normal lactation the milk yield rises to a maximum at some time within the first three to six weeks, and then, after remaining fairly steady for a time, falls to the end of the lactation. It is also said that the fat percentage goes in the opposite direction. This is only partially true, as shown by data secured by Caldwell and M'Candlish [1]. From this the fat percentages for the first ten days of the lactations of six cows are given in Table IV.

On the average this group of cows start with very low fat percentages, which rise rapidly for a few days and then fall to normal. However, there are wide variations among the individual cows—one commences at a high level, though the majority start with a low butter-fat percentage.

TABLE IV.—VARIATIONS IN EARLY LACTATION.  
(Caldwell and M'Candlish [1].)

Time after Calving	Cow No.						Average.
	5	9	25	46	49	54	
	Fat Percentage.						
At once	.60	3.05	4.80	2.50	1.80	1.80	2.43
1 day	2.80	5.95	3.70	3.15	2.90	3.15	3.61
2 days	3.00	3.80	4.50	3.40	3.43	3.00	3.52
3 "	5.10	3.90	4.60	3.70	4.20	3.90	4.23
4 "	5.00	3.70	..	4.90	3.55	3.90	4.21
5 "	3.60	3.40	3.95	4.80	4.20	4.10	4.01
6 "	4.40	3.50	5.75	4.80	3.65	4.30	4.40
7 "	4.25	3.35	3.45	4.50	3.55	4.10	3.87
8 "	4.30	3.50	3.75	4.25	3.90	3.40	3.85
9 "	4.00	3.45	3.75	4.30	..	3.60	3.82
10 "	3.80	3.40	3.10	3.70	3.70	3.10	3.47

It is interesting to note that No. 5, the animal with the lowest initial test, has the highest average for the period.

Another point of interest is that No. 25 shows a rise from 3.95 to 5.75 per cent, or a difference of 1.80 per cent from the fifth to the sixth day, and then falls by 2.30 per cent to 3.45 per cent on the seventh day.

Though the variations in fat percentage during the first few days of the lactation may be quite irregular, there is a general change which runs through the lactation as a whole. This is demonstrated by figures secured by Speir [10] from Scottish milk records. These are summarised in Table V.

TABLE V.—VARIATION WITH LACTATION.  
(Speir [10].)

Calved under				No. of Cows.	Fat.
					Per cent.
1 week	.	.	.	38	3.75
2 weeks	.	.	.	97	3.56
4 "	.	.	.	149	3.23
6 "	.	.	.	208	3.31
8 "	.	.	.	243	3.32
10 "	.	.	.	221	3.34
12 "	.	.	.	175	3.42
14 "	.	.	.	114	3.42

This shows the tendency for the fat content to fall from the beginning of the lactation for about four to six weeks. Then it starts to rise again, and this continues until the end of the lactation.

## 5. ŒSTRUM.

Often when a cow on test shows a fall in milk yield or fat percentage this is said to be due to the fact that the cow is in season. This may be true at times, but the influence of œstrum on the yield and composition of milk is often assigned greater importance than it deserves.

When a cow is in heat the yield of milk and the fat content may remain steady, or both may go up or down, or again either one may go up or down while the other varies in the opposite direction. In view of this, and of the fact that several of these combinations of variations may be obtained with the same cow at successive heat periods, it may be taken that œstrum has no definite influence on the fat content of the milk. However, in individual cases large variations up or down in the fat content may at times be correctly attributed to the incidence of œstrum.

## 6. HEALTH.

The health of the cow has an important bearing, not only on the yield of milk but also on the percentage of fat present. As a general rule a disturbance of health results in a lowered milk yield and an increased fat percentage. Sometimes the increase in fat percentage may come first and be followed by a lowered milk yield. There are exceptions to this general rule, however. In some cases there may be a sudden fall in both milk yield and fat percentage. A good example of this is found in the case of a cow giving 19 lb. milk with 3.6 per cent butter-fat in the evening. She took suddenly ill, and in the morning gave only 9.5 lb. milk with 1.1 per cent fat.

Any disturbance in general health or digestion may lead to a temporary rise in butter-fat content without lowering the milk yield, but with continued sickness the milk yield is seriously lowered. Though the fat percentage may be high in such cases, the yield of fat is lowered.

Where degenerative changes take place in the udder, as in mastitis, the fat percentage of the milk is lowered. Under such conditions the milk may be far from normal and quite unfit for consumption.

## 7. DAILY VARIATIONS.

From day to day the fat content of the milk of individual cows shows wide variations. This was shown in the original data used in the preparation of a report by M'Candlish and Struthers [7] and set out in Table VI.

TABLE VI.—INDIVIDUAL DAILY VARIATIONS.  
(M'Candlish and Struthers [7].)

Day.	Cow No.								
	2	7	14	18	32	39	47	53	54
	Fat Percentage.								
1 . .	3.3	3.4	3.5	3.5	3.5	3.7	3.4	3.1	3.1
2 . .	3.6	3.3	3.9	3.3	3.7	3.3	3.2	3.4	2.8
3 . .	3.5	3.1	3.5	3.2	3.5	3.7	3.0	3.5	3.3
4 . .	3.6	3.1	3.8	3.3	3.6	3.7	3.2	3.6	2.7
5 . .	3.3	3.1	3.4	3.3	3.6	3.7	3.2	3.6	3.0
6 . .	3.4	3.0	3.8	3.2	3.7	3.6	3.6	3.5	3.4
7 . .	3.4	3.1	3.6	3.1	3.5	3.2	3.1	3.3	4.1
8 . .	3.4	3.0	3.8	3.2	3.8	3.7	3.5	3.3	2.8
9 . .	3.5	3.0	3.5	3.5	3.7	3.3	3.5	3.3	2.7
10 . .	3.3	2.9	3.4	3.3	3.5	3.7	3.4	3.1	2.9

These figures are the individual daily fat percentages over a period of ten days for a group of cows on a normal ration. It is seen that the fat percentages for some of the cows remain fairly steady, the variation from the lowest to the highest within the ten days not exceeding .3 per cent, but in one case the variation reaches 1.4 per cent.

Then there is the question of variation from one day to the next. With one cow the largest variation from day to day is only .2 per cent; with four, it is .3 per cent; with one, it is .4 per cent; and with another, it is .5 per cent; while in one case it reaches 1.3 per cent.

These are typical of the day-to-day variations which can occur in the fat percentage, though much larger changes are found occasionally. Some of these daily variations can at times be attributed to some of the other factors being considered here, but some of them cannot be so explained, and can only be termed individual daily variations.

#### 8. CONDITION OF THE COW.

The condition of the cow has a definite influence on the percentage of fat in the milk. This is best illustrated by the classic work of Eckles [3]. In Table VII. are given the daily fat percentages at the start of two lactations for a cow which was in low condition at one calving and in high condition at the next.

TABLE VII.—INFLUENCE OF CONDITION ON FAT CONTENT.  
(Eckles [3].)

Day after Calving.	Condition of Cow.	
	Low.	High.
	Per cent.	Per cent.
3 . . .	..	5.68
4 . . .	..	5.35
5 . . .	..	4.81
6 . . .	2.8	4.13
7 . . .	2.4	4.34
8 . . .	3.9	4.16
9 . . .	3.5	3.87
10 . . .	2.8	3.89
11 . . .	2.6	3.63
12 . . .	3.1	3.28
13 . . .	2.7	3.11
14 . . .	3.03	2.85
15 . . .	2.65	3.20
16 . . .	2.69	3.00
17 . . .	2.80	2.80

In the first lactation this cow was in low condition, and her fat percentage during the early part of the lactation was low. In the succeeding lactation, when in high condition, she started out with a high fat percentage which gradually came down to her normal.

The fat percentage for each of the twelve months of the first and second lactations of two groups of cows were also given by Eckles [3]. One group of seven were fat at the start of the first lactation, while a group of eight were thin. Both were in normal condition at the start of the second lactation.

TABLE VIII.—INFLUENCE OF CONDITION ON FAT CONTENT.

(Eckles [3].)

Month.	Seven Cows.		Eight Cows.	
	First Lactation Fat.	Second Lactation Normal.	First Lactation Thin.	Second Lactation Normal.
	Per cent.	Per cent.	Per cent.	Per cent.
1 . . . .	4.8	4.5	4.0	4.6
2 . . . .	4.7	4.4	3.9	4.5
3 . . . .	4.7	4.3	4.3	4.8
4 . . . .	4.8	4.3	4.8	4.7
5 . . . .	4.9	4.4	4.7	4.9
6 . . . .	4.7	5.1	4.9	5.1
7 . . . .	4.8	4.7	5.1	5.0
8 . . . .	4.9	5.1	5.3	5.4
9 . . . .	5.3	5.5	5.5	5.6
10 . . . .	5.5	5.6	5.4	5.6
11 . . . .	5.7	5.4	5.2	5.9
12 . . . .	5.7	5.4	5.7	5.8

The group fat at the first calving averaged higher in fat for the first five months of the lactation, and for eight out of the twelve months, than they did in the next lactation after calving in normal condition. The other group, calving thin for the first lactation, gave lower testing milk in ten out of the twelve months than they did in the succeeding lactation when calving in normal condition.

The influence of condition at the time of calving on the fat content of the milk may be greatest just after calving, but it also has an influence throughout the lactation. The easiest and most effective way of improving the fat content of the milk is by getting the cows into good condition before calving. Have the cows in good condition at the time of calving and they will give the best quality of milk which they are capable

of producing. Good condition at the time of calving is probably one of the reasons why heifers generally give a better fat percentage in their first lactation than they do later in life.

### 9. FEEDING.

It has just been shown that the condition of the cow at calving influences the fat percentage in her milk—this is an indirect action of the feed given before calving. Good feeding of the dry cow improves her condition, and so enables her to give richer milk in the next lactation.

Now for the influence of the feed given while the cow is in milk. It has been shown by Eckles and Palmer [4] that continuous overfeeding does not influence the fat content of the milk. However, if for any reason the fat content of the milk has tended to be away from the normal for the animal, continuous overfeeding will tend to bring it back towards normal.

On the other hand, Eckles and Palmer [5] found that under-feeding had an influence on the fat content. They recognised three types of under-feeding. These were: (1) reduction of the feeding from normal to low; (2) reduction of the feeding from high to normal; (3) physiological under-feeding, which occurs with heavy milking cows shortly after calving when they are unable to assimilate sufficient nutrients for maintenance and milk production.

It was found that physiological under-feeding and the reduction from high to normal feeding were always accompanied by a marked increase in the fat percentage, especially when the cows were in high condition. The reduction of the feeding from normal to low produced varying results on the fat percentage—sometimes there was an increase, sometimes a decrease, and sometimes no change. Several factors appeared to be linked up with the changes brought about in this case.

It is frequently stated that certain feeds can increase the fat content of milk. This is not so. There is no feed known which will appreciably improve the fat content of milk over any considerable period. However, when any sudden or marked change is made in the ration there may be a temporary change in the fat percentage, either up or down, but in a short time the fat content comes back to normal. Such changes are simply due to digestive, or other physiological, disturbances.

In recent years there have been claims that the feeding of butter or cream to cows will increase the fat content of milk, but in trials on this problem Sheehy [8] and M'Candlish and Struthers [7] did not find any increase in the fat content on feeding butter or cream to milking cows. There have also

been many trials with other fats and oils, but none of these have been found to be of any value for increasing the fat content of milk.

#### 10. TURNING TO PASTURE.

Most complaints regarding low-testing milk are for a period after the cows go to pasture. In a very large number of cases there is an increase in the milk and a fall in the fat percentage at this time. This need not always occur, however, as it has been found at the West of Scotland Agricultural College, and elsewhere, that a rise in fat content can occur when the cows are turned out.

The two factors which appear to influence this most are the condition of the cows and their previous feeding. Where the cows have been liberally fed and are in high condition when they go to pasture, the milk yield will remain fairly steady or go up but slightly, while the fat percentage will rise. On the other hand, when the cows are in poorer condition and have not been so well fed previously, the milk yield will rise considerably and the fat percentage fall for a time after the cows go to pasture.

#### 11. HOUSING.

It would appear that the conditions under which cows are housed have an influence on the fat percentage in the milk. This was indicated in early trials in Scotland reported by Speir [11] and Douglas [2]. In each of two years trials were carried out on five farms. One group of cows on each farm was kept in a byre with free ventilation, while another was in a byre with restricted ventilation.

TABLE IX.—INFLUENCE OF VENTILATION.  
(Speir [11] and Douglas [2].)

Year.	Daily Milk.	Fat.	Average Tem-perature.	Daily Milk.	Fat.	Average Tem-perature.
	lb.	Per cent.	°F.	lb.	Per cent.	°F.
1 .	27.5	3.55	49.8	27.3	3.49	59.4
2 .	25.7	3.4	49.4	25.4	3.3	57.7

The differences in fat percentage are perhaps not great, but they are in favour of the freely ventilated byre with the lower temperature. Recent work at various centres has indicated that similar or even greater differences can be expected with variations in temperature—the higher the temperature the lower the fat percentage.



## 12. CLIMATE.

There is a seasonal variation in butter-fat percentage—the tendency being for higher tests in winter and lower in summer. This is probably associated mainly with temperature variations. Sudden variations in weather conditions may bring about a lowering of the milk yield, and then the fat percentage may remain steady or go up slightly.

## 13. DRUGS.

Frequent claims have been made that the administration of drugs will increase the fat content of the milk. However, no real convincing evidence has ever been produced on this point, and it may be taken that there is no drug known which will definitely increase the fat percentage in milk.

## 14. MILKING.

The act of milking has a considerable influence on the fat content of the milk obtained. There are two main ways in which this can be brought about, and these will be considered separately:—

(a) *Time and Interval.*—It is generally held that morning milk is poorer in fat than is evening milk, and though this is true in many cases the statement cannot be accepted without reservation. This is shown in a group of figures by Speir [9], which are presented in Table X. They are the average fat percentages for a group of herds over a period of six months.

TABLE X.—FAT IN EVENING AND MORNING MILKS.  
(Speir [9].)

Farm.	No. of Cows.	Evening.	Morning.	Variation.
		Per cent.	Per cent.	Per cent.
A. . . .	58	4.00	3.85	— .15
B. . . .	60	3.92	3.83	— .09
C. . . .	60	3.82	3.82	.00
D. . . .	61	4.23	3.95	— .28
E. . . .	61	3.88	4.06	+ .18
F. . . .	52	3.86	3.82	— .04
G. . . .	52	4.07	3.95	— .12
H. . . .	44	3.83	3.77	— .06
I. . . .	39	4.35	4.15	— .20
J. . . .	52	3.83	3.77	— .06
K. . . .	54	4.01	4.01	.00
Average . .	..	3.98	3.91	— .07

These herds were milked at even intervals, and on the average there was little difference in the fat percentage for evening and morning, though the morning was slightly lower. If the herds be taken separately, it is found that in eight cases the morning milk was lower in fat, in two cases there was no difference, while in one case the morning milk was higher in fat than was that of the evening.

It can be said, therefore, that when the intervals between milkings are even there is little difference in the fat content of the evening and morning milks as a rule, though it is generally slightly lower in the morning. When the intervals between milkings are uneven, the morning milking is generally after the longer interval, and then the morning milk tends to be still lower in butter-fat.

The individual variations in morning and evening milk can be shown by the data for a group of ten cows tested by the Scottish Milk Records Association at two successive tests in February 1936.

TABLE XI.—EVENING AND MORNING MILKS AT SUCCESSIVE TESTS.

Cow No.	First Test.			Second Test.		
	Evening.	Morning.	Variation.	Evening.	Morning.	Variation.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1 .	4.3	4.2	— .1	4.4	3.5	— .9
2 .	4.7	4.0	— .7	4.0	3.0	— 1.0
3 .	5.0	4.0	— 1.0	4.6	4.7	+ .1
4 .	3.8	3.7	— .1	5.2	2.9	— 1.3
5 .	4.5	4.3	— .2	4.5	3.8	— .7
6 .	4.7	4.0	— .7	4.7	4.3	— .4
7 .	4.3	3.8	— .5	4.3	3.4	— .9
8 .	4.0	3.3	— .7	3.8	3.4	— .4
9 .	3.9	3.2	— .7	4.1	3.3	— .8
10 .	3.9	3.2	— .7	4.0	3.4	— .6

In this case the average intervals between milkings were 11½ and 12½ hours at both tests, the morning milkings being after the long intervals. During the first test all cows had a lower fat percentage in the morning than in the evening, the drop in the morning ranging from .1 to 1.0 per cent. At the second test one cow showed an increase of .1 per cent in the butter-fat test in the morning, while the others showed decreases ranging from .4 to 1.3 per cent. On the whole there are greater variations in the second test than in the first.

A further group of figures obtained by the Scottish Milk

Records Association at about the same time as those just mentioned are given in Table XII. The intervals between milkings were  $11\frac{1}{2}$  and  $12\frac{1}{2}$  hours at Farm A. and  $11\frac{1}{2}$  and  $12\frac{3}{4}$  hours at Farm B.

TABLE XII.—VARIATION IN EVENING AND MORNING MILKS.

Farm A.				Farm B.			
Cow No.	Evening.	Morning.	Variation.	Cow No.	Evening.	Morning.	Variation.
	Per cent.	Per cent.	Per cent.		Per cent.	Per cent.	Per cent.
1	2.9	2.5	-.4	1	3.3	3.5	+.2
2	4.0	2.4	-1.6	2	4.3	3.7	-.6
3	5.1	3.9	-1.2	3	4.0	4.3	+.3
4	3.8	3.6	-.2	4	3.1	3.1	.0
5	6.5	5.2	-1.3	5	3.0	4.2	+1.2
6	3.5	3.2	-.3	6	3.5	3.4	-.1
7	3.7	3.6	-.1	..	..	..	..
8	5.1	4.9	-.2	..	..	..	..
9	4.5	4.0	-.5	..	..	..	..
10	4.2	3.5	-.7	..	..	..	..

On these two farms there is only a quarter of an hour difference in the milking intervals, and the maximum temperature in each byre during the night was the same,  $54^{\circ}$  F., and yet there is a considerable difference in the results obtained. On Farm A., with rather the more even intervals between milkings, all cows show a lowered fat percentage in the morning, the decrease ranging from .1 to 1.6 per cent, with three out of the ten animals showing decreases of 1.2 per cent or over.

On Farm B., with less even intervals between milkings, only two cows show a lowered fat percentage in the morning, and the decreases were only .1 and .6 per cent. One cow shows no change, and three out of the six cows show increases in the morning fat percentage ranging from .2 to 1.2 per cent. Evidently the interval between milkings and the byre temperature are not the only factors controlling the difference in fat percentage between milkings.

(b) *Efficiency.*—The efficiency of milking is of great importance. It is well known that the first drawn milk is the poorest and the last drawn the richest in fat. Unless the cow is efficiently milked, the fat percentage will not be as high as it should be. This can be shown with the results obtained with two cows.

These cows were partially milked and the milk was sampled. Then the milking was completed and the milk sampled again.

The fat percentages for the milks without the strippings were 3.4 and 3.5 per cent, and for the whole milkings, including the strippings, 5.1 and 4.6 per cent. There is no need to emphasise further the necessity of efficient milking if the best fat percentage is to be secured.

The individual fat percentages for Farms A. and B. used in the last section have been set out in Table XIII. along with the yields of milk and butter-fat. There now appears an explanation of the difference in results secured on the two farms.

On Farm A. there was a shorter interval before the morning milking than on Farm B., and the byre temperatures were the same. Consequently, if there was to be any difference, it would be expected that the greatest depression of butter-fat would occur at Farm B., but the reverse is the case.

TABLE XIII.—THE DIFFERENCE OF GOOD AND POOR MILKING.

Cow No.	Evening.			Morning.		
	Milk.	Fat.	Fat.	Milk.	Fat.	Fat.
<i>Farm A.</i>						
1	lb. 16.5	Per cent. 2.9	lb. .48	lb. 18	Per cent. 2.5	lb. .45
2	26	4.0	1.04	25.5	2.4	.61
3	13	5.1	.66	14.5	3.9	.57
4	13	3.8	.49	14.5	3.6	.52
5	13.5	6.5	.88	14	5.2	.73
6	12.5	3.5	.44	12.5	3.2	.40
7	13.5	3.7	.50	16	3.6	.58
8	11	5.1	.56	12	4.9	.59
9	15.5	4.5	.70	15.5	4.0	.62
10	23.5	4.2	.99	26	3.5	.91
Average	15.8	4.27	.67	16.9	3.55	.60
Daily total	..	..	..	32.7	3.90	1.27
<i>Farm B.</i>						
1	18.5	3.3	.61	24	3.5	.84
2	21	4.3	.90	28	3.7	1.04
3	18.5	4.0	.71	21	4.3	.90
4	19	3.1	.59	20.5	3.1	.64
5	16.5	3.0	.50	18.5	4.2	.78
6	23	3.5	.81	28	3.4	.95
Average	19.4	3.54	.69	23.3	3.68	.86
Daily total	..	..	..	42.7	3.61	1.55

When the milk and fat yields are considered, it is found that on Farm B. the milk yield on the average is increased by 3.9 lb. in the morning and the fat yield by .17 lb.—about what is to

be expected. On the other hand, on Farm A. the average milk yield in the morning is only up by 1.1 lb. from the evening, and the fat yield in the morning is down by .07 lb. With the longer interval before the morning milking there should be a larger milk yield in the morning, but the fact that the milk yield is up only slightly and the fat yield and fat percentage are down shows that on Farm A. the milking was not carried out efficiently in the morning. The cows were not stripped out cleanly in the morning, and so there was a marked drop in fat yield and fat percentage.

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## ANALYSES FOR MEMBERS DURING 1935.

By Dr J. F. TOCHER, Aberdeen, Analyst to the Society.

THE number of samples received during 1935 was 248, of which 36 were fertilisers, 62 were feeding-stuffs, 34 were milks, 44 were waters, 25 were examinations for poisons, and 47 were miscellaneous samples. The following table (Table I.) shows the number and nature of the samples analysed during the past six years :—

TABLE I.

	1935.	1934.	1933.	1932.	1931.	1930.
Fertilisers . . .	36	38	41	45	32	34
Feeding-stuffs . .	62	35	37	32	43	27
Waters . . .	44	52	47	44	53	37
Other samples—						
Milks . . .	106	102	115	97	125	129
Poisons . . .						
Miscellaneous						
Total . . .	248	227	240	218	253	227

## FERTILISERS.

*General.*—The fertilisers examined may be classified as follows :—

TABLE II.

Compound fertilisers . . .	11
Basic slags . . .	3
Limes . . .	2
Potash salts . . .	1
Moss litter . . .	3
Superphosphates . . .	3
Blood meals . . .	3
Bone meals . . .	3
Meat and bone manures . . .	3
Dissolved bones . . .	1
Lawnvet . . .	1
Kiln dust . . .	1
Potassic mineral phosphate . . .	1
	<hr/> 36

The average composition of the complete compound fertilisers analysed was found to be 5.76 per cent nitrogen, 6.39 per cent soluble phosphoric acid, 4.75 per cent insoluble phosphoric acid, and 7.90 per cent potash. The proportion of nitrogen in the compound fertilisers ranged from 2.43 to 8.50 per cent. The variation in soluble phosphoric acid was from 2.51 to 9.20 per cent, while that of insoluble phosphoric acid was from 1.63 to 15.87 per cent. The proportion of potash varied from 2.59 to 15.09 per cent. The following table (Table III.) shows the results of analyses of samples of compound fertilisers analysed during the year :—

TABLE III.

	Nitrogen.	Soluble phosphoric acid.	Insoluble phosphoric acid.	Potash.
Turnip manure . . .	3.33	8.06	6.04	3.55
"    "    "    " . . .	2.43	9.20	7.92	2.59
Early potato manure . . .	7.68	6.91	..	5.46
"    "    "    " . . .	8.50	7.07	1.63	7.60
"    "    "    " . . .	6.45	5.08	3.59	15.09
"    "    "    " . . .	8.26	7.08	1.85	7.95
"    "    "    " . . .	6.91	5.09	3.71	13.84
Grass manure . . .	6.19	7.04	3.12	6.64
Compound fertiliser . . .	4.00	2.51	10.15	5.97
"    "    "    " . . .	5.84	..	15.86	5.96
"    "    "    " . . .	5.42	..	15.87	5.33

The fertilisers analysed included, in addition to the usual compound mixtures, samples of basic slag, bone meal, dissolved bones, meat and bone meal, blood meal, potash salt, potassic mineral phosphate, superphosphate, ground shell lime, waste lime, kiln dust, and moss litter. The samples of compound fertilisers were found to conform to the guarantees given. The average composition of mixtures intended for the potato crop was nitrogen 7.56 per cent, soluble phosphoric acid 6.25 per cent, insoluble phosphoric acid 2.16 per cent, and potash 10.00 per cent. Three samples of basic slag, containing from 16.70 to 17.60 per cent of phosphoric acid, were found to be deficient in citric solubility. May I point out to members that supplying a guarantee for citric solubility in slags or other phosphatic fertilisers is optional to the seller

and that no limits of variation are prescribed. If, however, a guarantee is given, the seller is legally responsible to supply the article in accordance with the guarantee. Blood meal samples were found to contain from 12·5 to 13·5 per cent of nitrogen—values near the average. Blood meal is, of course, a product of the slaughter-houses and is rarely purchased by the farmer. The moss litter fertilisers contained from 1·4 to 2·7 per cent of nitrogen, from 2·5 to 3·1 per cent of insoluble phosphoric acid, and from 0·8 to 1·6 per cent of potash. I gave a valuation of each of the samples, using the Society's scale of unit values. One of the samples of bone meal contained 4·06 per cent of nitrogen and 23·52 per cent of insoluble phosphoric acid, a proportion distinctly above the average. A sample of kiln dust examined for its value as a fertiliser was found to contain 2·5 per cent of nitrogen but only 1·2 per cent of insoluble phosphoric acid and 1·24 per cent of potash. A sample of lawn dressing had the following composition: nitrogen 7·14 per cent, soluble phosphoric acid 8·37 per cent, insoluble phosphoric acid 6·07 per cent, and potash 3·03 per cent. In addition to these fertilising constituents the mixture contained 12 per cent of the weed-killer, sulphate of iron.

#### FEEDING-STUFFS.

Sixty-two samples of feeding-stuffs were analysed during the year, including the usual compound cakes and meals and most of the concentrates in use at the present time.

The following table (Table IV.) shows the composition of the chief feeding-stuffs analysed :—

[TABLE IV.



TABLE IV.

	OIL.	Albu- minoids.	Phos Acid.	Fibre.	Ash.	Moisture.
Meat and bone meal	9-10	49-62	12-67	..	..	..
Meat and bone meal	12-34	44-38	14-00	..	..	4-67
Meat and bone meal	15-10	38-12	15-45	..	..	6-22
Meat and bone meal	9-13	48-19	13-23	..	..	..
Meat and bone meal	9-91	51-75	11-82	..	..	..
Meat and bone meal	10-80	52-50	10-69	..	..	..
Meat and bone meal	10-34	45-56	13-63	..	..	..
Meat and bone meal	13-93	47-69	12-09	..	..	..
Meat and bone meal	13-27	49-31	11-64	..	..	..
Meat and bone meal	16-88	47-81	9-73	..	..	..
Meat and bone meal	14-98	47-50	10-41	..	..	..
			Carbo- hydrates.			
Sheep cubes	8-06	28-00	37-79	6-45	6-60	13-10
Sheep cubes	8-11	27-12	39-17	7-70	5-67	12-23
Ground nut cake	..	41-63	..	..	..	..
Oatmeal	7-67	15-50	..	1-96	1-87	..
Oatmeal	6-13	14-19	67-22	1-62	1-87	8-97
Dried grains	11-02	24-75	..	..	..	..
Dried grains	8-25	17-62	..	..	..	..
Extracted soya bean meal	1-40	44-20	33-10	4-90	5-60	10-80
Offals from kiln	1-78	11-00	69-64	3-30	2-60	11-68
Flour offals	4-00	9-62	74-62	0-69	1-50	9-57
Kiln - dried rolled wheat	1-34	10-56	74-24	1-53	1-52	10-81
Flour extract	1-15	8-63	76-52	0-69	0-82	12-19
Maize cobs	5-07	10-50	66-68	1-97	2-95	12-83
Tare meal	2-59	24-81	50-29	4-48	2-55	15-28
Nutted Egyptian cot- ton cake	..	24-94	..	..	..	..
Dairy dry feed mix- ture	..	25-88	..	..	..	..
Dairy dry feed	3-65	22-37	51-60	5-23	5-58	11-57
Dry feed ration	3-87	23-50	48-66	9-66	4-21	10-10
Balanced dairy mix- ture	4-27	23-25	..	7-90	..	..
Poultry meal	4-57	17-12	..	4-65	..	..
Poultry meal	4-12	16-31	..	5-22	..	..
Poultry meal	2-60	15-87	..	4-47	..	..
Poultry meal	5-96	14-62	..	7-15	..	..
Poultry meal	2-07	15-62	..	2-87	..	..
White pea offal meal	0-95	22-12	50-14	5-93	9-49	11-37
Feeding-stuff	2-95	18-56	57-57	4-01	5-00	11-91
Feeding-stuff	3-26	17-75	56-80	4-37	4-86	12-96
Feeding-stuff	3-70	14-62	61-87	3-72	4-55	11-54
Feeding-stuff	3-73	19-44	55-60	4-80	6-20	10-23
Feeding cake	10-19	19-25	..	7-95	..	..
Feeding cake	11-62	16-62	..	7-02	..	..
Grass	2-92	18-58	47-57	23-63	7-30	..
Grass	3-53	16-84	46-95	23-00	9-68	..
Pig meal	2-92	13-75	61-50	3-37	7-25	11-21
Sow meal	2-75	18-62	59-99	3-36	3-61	11-67
Linseed cake	7-00	..	..	..	..	..
Linseed	40-66	20-58	22-19	5-25	3-20	8-12
Balanced ration	5-69	17-94	..	6-42	..	..
Balanced ration	7-01	19-25	..	6-98	..	..

As will be seen from the above table, the feeding-stuffs examined included samples of compound cakes and meals, linseed, linseed cake, cotton-seed cake, dried distillery grains, soya bean meal, barley, oatmeal, tare meal, meat and bone meal, ground-nut cake, kiln-dried wheat, wheat offals, pea

offal meal, flour offals, dairy mixture, and pig and poultry meals. The average composition of eleven samples of bone and meat meal analysed was : oil 12.34 per cent, albuminoids 47.49 per cent, and phosphoric acid 12.31 per cent. The samples of dried distillery grains were found to vary considerably, containing from 8.2 to 11.0 per cent of oil and from 17.6 to 24.7 per cent of albuminoids. The averages for past years were 10 per cent oil and 26 per cent albuminoids. A sample of oatmeal was found to contain 7.7 per cent of oil and 15.5 per cent of albuminoids and was of good quality. The proportions of both fibre and mineral matter were normal and did not indicate any admixture with low grade material. The average proportions of oil and albuminoids in oatmeal are 8 per cent and 14 per cent respectively. A sample of white pea offal meal was unsatisfactory, since it contained about 6 per cent of extraneous mineral matter, including 5 per cent of sand. A sample of flour offals contained a small admixture of fat, but was quite suitable for feeding purposes. Two samples of grass were found to have energy values of 269 and 276 calories per 100 grams—values slightly higher than the average for cultivated pastures. Poor pastures have energy values of about 230 calories per 100 grams. The mineral analysis showed that the sample with the higher calorific value also contained appreciably greater proportions of calcium and of phosphoric acid. A sample of linseed grown in Aberdeenshire was found to be of good quality, containing 40.7 per cent of oil and 20.6 per cent of albuminoids. I seldom find samples of even the best imported seed to yield such a high proportion of oil.

### MILKS.

Thirty-four samples of milk were analysed during the year. The number of samples found to be deficient or poor in quality was eleven, as against fourteen last year. Two samples were found to be low in fat, seven in solids-not-fat, and two in both fat and solids-not-fat, when compared with the presumptive limits prescribed by the Ministry of Agriculture. The proportions of fat in the samples varied from 2.6 to 6.3 per cent, while that of solids-not-fat ranged from 8.1 to 9.2 per cent. A very high proportion of all the samples of milk analysed in my laboratory during last spring was found to be deficient in solids-not-fat. A sample of skimmed milk contained 0.65 per cent of fat and 8.83 per cent of solids-not-fat, and was quite a satisfactory sample.

The following table (Table V.) gives the results of analyses of fifteen samples of milk which were examined both for butter-fat and solids-not-fat:—

TABLE V.

No.	Fat, per cent.	Solids-not-fat, per cent.	No.	Fat, per cent.	Solids-not-fat, per cent.
1	6.30	8.08	9	2.90	8.46
2	4.10	8.40	10	3.90	8.55
3	3.50	8.43	11	2.61	8.56
4	2.80	8.13	12	3.65	9.17
5	3.80	8.24	13	3.50	8.63
6	3.90	8.22	14	3.30	8.42
7	3.55	8.57	15	3.50	8.33
8	3.78	8.85			

The following table (Table VI.) shows the nature of the distribution of butter-fat and solids-not-fat in these samples :—

TABLE VI.

Butter-fat percentage.	Frequency.	Solids-not-fat percentage.	Frequency.
under 1	..	under 7	..
1 to 2	..	7.0 to 7.5	..
2 to 3	3	7.5 to 8.0	..
3 to 4	10	8.0 to 8.5	9
4 to 5	1	8.5 to 9.0	5
5 to 6	..	9.0 to 9.5	1
6 to 7	1	9.5 to 10.0	..
	<hr/> 15		<hr/> 15

No action has yet been taken by the Government to amend the law relating to the sale of milk. The Interdepartmental Committee on Milk in 1922, after a prolonged investigation extending over eight months, recommended to the Secretary for Scotland that the law should be amended to provide for legal minimum limits for butter fat and solids-not-fat, instead of the present presumptive limits. At present the seller, if charged with an offence and holds that he is innocent, has to prove in Court or otherwise that neither he nor his employees tampered with the milk in any way. This he has to do in order to rebut the presumption that he is guilty of selling adulterated milk. In other words, he stands guilty of the offence until he proves his innocence. The Departmental Committee recommended that the legal minimum limits should be 3 per cent for butter fat and 8.5 per cent for solids-not-fat. If this recommendation becomes law the seller could not plead that the milk he sold was *genuine* milk if charged with selling milk containing less than the legal minimum limits. If, however, the milk was proved to be below the legal limits for the constituents, the seller instead of being charged with a criminal offence would come under a civil liability for the offence. The object of the civil claim would be to discriminate

between the seller of poor genuine milk and the seller who fraudulently adulterates his milk. The seller against whom adulteration had been proved would be charged with a criminal offence and he would be punished in the Criminal Courts. This amendment would enable local authorities to discriminate between the seller of poor genuine milk and the seller who adulterates his milk either by adding water, removing butter fat, or by any other means.

#### WATERS.

Forty-four samples of water were analysed during the year, and of these twenty-one were passed as being fit for domestic use. Fourteen samples of water examined for potability were reported as unfit for domestic use since the proportions of free or albuminoid ammonia indicated contamination. One sample sent for analysis by a dairy farmer as to its suitability for washing milk utensils was found to be of satisfactory quality for the purpose. A sample was reported as unfit for drinking owing to the presence of dissolved lead. On account of the cumulative effect of lead and possible variations in plumbo-solvency owing to acidity and length of time in contact with piping, even slight traces of the metal are unsatisfactory in a water which is drunk habitually. One sample, otherwise of good quality, was found to require treatment for the removal of iron in solution. Another sample, otherwise of fair quality, was found to contain a slight trace of zinc in solution, probably due to action on galvanised piping. I do not regard this metal, when present in only minute quantity, to be dangerous to health, but traces of zinc in solution may cause a water to become opalescent on heating.

#### POISONS.

A fowl was found to have died from peritonitis following rupture of the oviduct. A search for poisons in the contents of the crop and alimentary canal gave negative results. Two samples of linseed cake were found to contain castor seed husk, and, since the stomachs of the animals fed on the cake also contained a considerable proportion of the husk, I reported that, in my opinion, the animals died from poisoning by ricin, the active principle in castor seed. Wheat treated with a solution of strychnine was found, in one case, to be the cause of death. Several samples of feeding-stuffs suspected to have caused scouring showed no traces of any injurious substances. I suggested that a too narrow albuminoid ratio in the ration was a possible explanation of the scouring, as it is known that a high proportion of protein does produce that effect. Two pullets were examined for poisons, with negative results.

They were found to have been affected with contagious catarrh. The organs of some turkey chicks were free from poisons. The cause of death was found to be pneumonia. In another case of suspected poisoning the material sent was inadequate and did not include the contents of the stomach—merely the stomach itself, completely opened out.

#### MISCELLANEOUS.

Two samples of linseed oil sold for feeding purposes were both found to be of good quality and to comply with the requirements of the British Pharmacopœia. A sample of mare's milk examined in connection with a complaint of curdling contained 1.65 per cent of fat and 8.96 per cent of solids-not-fat.

#### THE IODOL CASE.

##### *Implied Warranty under the Sale of Goods Act.*

During 1931 I analysed several samples of a feeding-stuff sold under the name of "Iodol." No report on the results of analyses could be submitted owing to legal action being taken against the purchaser for payment of the account. The purchaser refused to pay for the consignment on the ground that the article was not what it was represented to be. The samples of Iodol were analysed during March 1931. It was not until February 1934 that the claim against the purchaser was made in the Wick Sheriff Court. The Sheriff-Substitute (Norman Macdonald) made avizandum of the case and delivered his judgment, in favour of the defender farmer, on the 10th October 1934. The Sheriff found that the feeding-stuff did not conform to the representations made by the sellers—namely, that Iodol was worth ten times its weight of linseed cake. The manufacturers appealed to the Sheriff-Principal, who held that the statements made were of the nature of a trader's puff. Appeal was made to the Court of Session and came before the Second Division on the 21st June of this year. Judgment was given in favour of the defender farmer on the ground that the representations made were an implied warranty in the sense of the fourteenth section of the Sale of Goods Act, 1893. Lord Aitchison, the Lord Justice-Clerk, gave the leading judgment, and Lords Hunter, Anderson, and Murray agreed with the Lord Justice-Clerk that the appeal should be sustained and the Sheriff-Substitute's Interlocutor restored. The decision makes clear that any statement regarding the value of a fertiliser or feeding-stuff, given in addition to the guarantee under the Fertilisers and Feeding Stuffs Act, is a warranty of the goods and that the goods must conform to the warranty, which may either be an implied or a direct warranty.

## THE CEREAL AND OTHER CROPS OF SCOTLAND FOR 1935.

THE following comparison of the cereal and other crops of 1934 with those of the previous year has been prepared by the Secretary of the Society from answers to queries sent to leading agriculturists in different parts of the country.

The queries issued by the Secretary were in the following terms :—

1. What was the quantity, per imperial acre, and quality of grain and straw, as compared with last year, of the following crops ? The quantity of each crop to be stated in bushels. What quantity of seed is generally sown per acre ?—(1) Wheat, (2) Barley, (3) Oats.
2. Did the harvest begin at the usual time, or did it begin before or after the usual time ? and if so, how long ?
3. What was the quantity, per imperial acre, and quality of the hay crop, as compared with last year, both as regards ryegrass and clover respectively ? The quantity to be stated in tons and cwts.
4. Was the meadow hay crop more or less productive than last year ?
5. What was the yield of the potato crop, per imperial acre, as compared with last year ? The quantity to be stated in tons and cwts. Was there any disease ? and if so, to what extent, and when did it commence ? Were any new varieties planted, and with what result ?
6. What was the weight of the turnip crop, per imperial acre, and the quality, as compared with last year ? The weight of the turnip crop to be stated in tons and cwts. How did the crop braird ? Was more than one sowing required ? and why ?
7. Were the crops injured by insects ? State the kinds of insects. Was the damage greater or less than usual ?
8. Were the crops injured by weeds ? State the kinds of weeds. Was the damage greater or less than usual ?
9. Were the pastures during the season of average growth and quality with last year ?
10. How did stock thrive on them ?
11. Have cattle and sheep been free from disease ?
12. What was the quality of the clip of wool, and was it over or under the average ?

From the answers received, the following notes and statistics have been compiled :—

### EDINBURGH DISTRICT.

**MID-LOTHIAN.** *Wheat*—48 bushels per acre; straw, 40 cwt.; seed sown,  $3\frac{1}{2}$  bushels. *Barley*—50 bushels per acre; straw, 20 cwt.; 3 bushels sown. *Oats*—58 bushels per acre; straw, 25 cwt.; seed sown, 4 bushels. *Harvest*—Began same time as last year. *Hay*—50 cwt. per acre of very good quality. *Meadow Hay*—Practically none grown. *Potatoes*—5 tons per acre; practically no disease. *Turnips*—12 tons per acre; affected by drought and turnip-fly; with mild weather, tubers increased in size, giving a better weight; a good deal of resowing. *Insects*—No damage except by turnip-fly. *Weeds*—No injury of any consequence. *Pastures*—Good, a little affected by drought. *Live Stock*—Throve wonderfully well. Cattle and sheep were free from disease. *Wool*—Average clip of good quality.

**WEST LOTHIAN.** *Wheat*—Average crop; 40 to 44 bushels per acre; grain and straw of excellent quality; seed sown, 4 bushels per acre broadcast, 3 to  $3\frac{1}{2}$  bushels drilled. *Barley*—40 to 48 bushels per acre; grain fair; straw short but of fairly good quality; seed sown,  $3\frac{1}{2}$  to 4 bushels per acre. *Oats*—48 to 52 bushels per acre; grain fair; straw short, but quality fair; seed sown, 6 bushels broadcast, 5 bushels per acre drilled. *Harvest*—Began about the same time as last year, about a week earlier than usual. *Hay*—Under average; 1 ton 15 cwt. per acre; of excellent quality and well secured. *Meadow Hay*—Not much grown. *Potatoes*—Yield slightly under that of last year; earlies, 7 to 9 tons; main crops much about the same; free from disease and of excellent quality; no new varieties planted. *Turnips*—12 to 20 tons per acre; as in the case of last year, where sown early, an excellent crop; where later sown, or on land late ploughed or rough, the crop suffered severely from drought; crop braided well; little resowing. *Insects*—Practically no damage. *Weeds*—No damage; weeds more easily kept under control owing to drought. *Pastures*—Of fair quality, but suffered greatly in the latter part of the season owing to lack of moisture; less than average growth. *Stock*—Throve well where not too heavily stocked. Cattle and sheep comparatively free from disease. *Clip of Wool*—Average clip, of good quality.

**EAST LOTHIAN (Upper).** *Wheat*—Yield of grain about 40 to 48 bushels per acre, a much better yield of grain than last year; straw also better; seed sown, about  $3\frac{1}{2}$  bushels per acre where dressed with "Ceresan." *Barley*—Much better than previous year; yield about 48 to 56 bushels per acre; some grain rather rough in sample and commanded an indifferent price; seed sown, from 3 to  $3\frac{1}{2}$  bushels per acre. *Oats*—A good average crop; yield about 60 to 64 bushels per acre; straw of good quality except where crop was laid; seed sown, from 4 to 6 bushels per acre. *Harvest*—Began about same time as last year, rather earlier than usual in this district; weather showery at times, but most of crop secured in good order. *Hay*—A good average crop, about 50 cwt. per acre. *Meadow*

*Hay*—Rather less grown than usual. *Potatoes*—Barely so good as last year owing to period of drought in summer; yield 7 to 8 tons per acre; practically no disease; no new varieties planted. *Turnips*—Better than last year, though still under average; quality fair; crop braided quite well; only one sowing required. *Insects*—Turnip crop considerably damaged in some cases by rot in centre of shaws at top of bulb, probably caused by moth. *Weeds*—None. *Pastures*—Not so good as last year owing to continued drought in summer. *Stock*—Throve well, especially in earlier part of season. Cattle and sheep were free from disease. *Clip of Wool*—About average clip, of good quality.

EAST LoTHIAN (Lower). *Wheat*—40 to 60 bushels; average about 44 bushels per acre; was harvested in first-class order and practically all of millable quality; straw about 36 cwt. per acre; seed sown, 3 to 3½ bushels up to 4 bushels per acre in late sowings; yield rather less than last year. *Barley*—A good crop, but much of it was of secondary malting quality, being lean in the pickle owing to drought just before harvest, which caused too rapid ripening; it was harvested in first-class condition, and threshed out well; yields of 56 bushels per acre were common on good barley land, the average would be 4 bushels above 1934 crop; yield of straw was an average; seed sown, 3 to 3½ bushels per acre. *Oats*—The least satisfactory of the cereals, worse than last year; the straw was shorter than usual, and owing to the drought the grain was not well filled; the acreage of this crop continues to be considerably curtailed owing to low prices; thanks to good weather the crop was well got, but the yield would be 8 to 10 bushels below average. *Harvest*—Was a record one for earliness and shortness; a start was made early in August, and, the weather being good, the work was got through pleasantly. *Hay*—Quantity was about the same as last year, just under 3 tons per acre; was well got; areas have been much restricted in recent years owing to lack of demand and low prices, but the slight improvement that set in last season was maintained. *Meadow Hay*—None grown. *Potatoes*—A good crop; from 8 to 10 tons per acre; owing to successive seasons of drought virus diseases and leaf curl were very evident, with the result that many fields were turned down at the inspection for seed; potato disease, 'Blight,' was not much in evidence, but unfortunately 'Golden Wonder,' a variety much grown, was found to be so much affected by 'Sprain' as to be unsaleable in a number of cases, and had to be consumed by cattle. After two years of similar experience, this variety is rapidly going out of favour. *Turnips*—In 1934 swedes were reported the greatest failure in East Lothian for many years, and in 1935 they were much worse; it would be difficult to state any yield that would give an idea of the crop; in some cases the most promising crops disappeared almost entirely in July, owing to a severe attack of the turnip midge. So bad has this scourge become that many farmers are hesitating about sowing turnips and are extending the mangel break; besides, there were the usual difficulties and failures incidental to a season that was altogether much too dry for this crop. *Insects*—Insect pests were much in evidence, as is usual in a season of drought, but the most calamitous were the turnip midge on swedes. *Weeds*—Not more than usual; weeds were kept well under, and



the dry weather favoured weed-killing operations. *Pastures*—The season, like last, was too dry, and pastures provided scanty grazing, especially in the later part of the season. A very cold wet autumn, followed by a severe and prolonged winter, added much to the difficulties of stockmen. *Live Stock*—Throve well on the grass, but owing to low prices the return to graziers was not nearly so good as in 1934. Cattle and sheep were free from disease. *Clip of Wool*—Quite an average, and a slight upward tendency in the price of wool was helpful.

### BORDER DISTRICT.

**BERWICKSHIRE (Merse).** *Wheat*—Conditions for autumn wheat sowing immediately after the 1934 harvest were again favourable, and consequently a large acreage was seeded in excellent condition; including spring wheat the total acreage amounted to 7289 acres, an increase of 2000 acres over 1934; this compares with a normal acreage before and after the war of about 1500 acres. Wheat brairds made a good start and held a good appearance right into spring; ears appeared during the latter half of June and harvesting commenced early, being general by the middle of August, when the crop was mostly standing; 3 bushels was the usual seeding when drilled early; with a good harvest all wheats were of a good millable sample, the yield averaging 40 to 42 bushels with a natural weight of 62½ lb. Straw, 27 cwt. per acre, of moderate length and good quality. *Barley*—The acreage showed a drop of fully 2000 acres, little more than one-third of the normal pre-war acreage; the ground worked well, offering a good seed bed for the normal seeding of 2½ bushels. Brairds came quickly, even though none too vigorous; ears appeared by mid-June and harvest was general by mid-August. The crop was not heavy and harvesting was easier than usual. Grain of good quality, yielding above expectations, about 42 bushels with a natural weight of 55 lb. Straw light, 21 cwt. per acre. *Oats*—A total acreage of 21,906 was just under that of 1934 and represented two-thirds of the normal pre-war sowings; seeding commenced early in March with the land in fine tilth, later it became somewhat hard. Brairds came quickly and strong, and had a good appearance right through the season; 6 bushels was the usual seeding for big oats, 4 bushels for a Potato variety, mostly all drilled. The season was favourable, and by harvest in mid-August crops were bulky and generally standing. Showery weather and damp mornings delayed cutting, so that straw was somewhat broken over and grain was slightly discoloured. Deaf pickles were more in evidence than usual, but a yield above average and of good quality was secured in most instances; 44 to 46 bushels was general, with a natural weight of 43 lb. Straw was about 25 cwt. per acre and mostly of fine fodder. *Harvest*—Commenced early in August and general after the first fortnight, being early for the district. Four to five weeks saw most of the grain in stack, heavy morning dews being somewhat of a hindrance during cutting. When the weather broke about the third week of August some damage was caused to stack tops and to any stooks which still remained to be carted. *Hay*—An acreage of 13,294 repeated the recent tendency to increase the acreage a little

each year. Hay harvest was early and good, a very fine mixed crop of over 2 tons per acre was secured in perfect order; seldom has the district been so fortunate in stacking so much hay of really fine quality. Owing to dry weather, aftermaths were slow in coming away, but eventually afforded lamb food until well on in the season.

*Meadow Hay*—The area showed a drop of 700 acres; harvest was early, and though the bulk of about 25 cwt. per acre was not comparable with seeds hay, the quality was very fine; the crop was secured with little waste.

*Potatoes*—A total of 2040 acres showed a further shrinkage of 200 acres and was little above the smallest of recent times and 1000 acres below that of 1913; seed was planted early under very dry conditions, plants were slow to appear and generally had no robust appearance all season; rain came too late to secure a full crop and did some harm in promoting second growth. Haulms went down early, except where the crop had been specially treated; as lifting proceeded weather conditions became very unfavourable and four days' frost did some damage to those still in the ground. The crop varied very considerably, and on the average did not exceed 5½ tons ware, and that mostly of a small run. Little disease was showing at lifting time and pits kept well except where clamped wet. Spraying was not general, and no new varieties tried out on any scale.

*Turnips*—The acreage showed a further shrinkage, the total now being below 16,000 acres, a substantial drop from the 1913 total of 25,000 acres. It should be noted, however, that during the last two seasons there has been a considerable increase in the area devoted to kales and other green fodder crops. There was no great difficulty in securing brairds, sufficient moisture was available and land worked well; plants came quickly and were not interfered with by frost or the turnip-fly. The first sown fields went right ahead; growth was retarded in the later fields through lack of rain at the proper time; many fields of swedes developed into very fine crops; yellows were disappointing and showed a good deal of finger-and-toe and rot. The tonnage was variable, swedes generally about 25 tons and up to 34 tons or more; few fields of yellows returned 18 tons.

*Insects*—Some signs of a return of the moth or grub attacking swedes at the crown, but plants in most cases made a good recovery without any particular treatment being applied.

*Weeds*—The season was propitious for keeping annuals in check. Charlock was in evidence at flowering time to the usual extent, and the creeping thistle in pastures has now become a menace.

*Pastures*—Grass came early, was rough in June and very bare the first half of August, thereafter growth was steady, affording a good bite well into autumn without being very plentiful. The quality was above average all season. Sown-out seeds were either very good, particularly after wheat, or were almost a failure, probably due to the dry hot weather after sowing.

*Stock*—Generally did very well; ewe stocks were easily brought through the winter; lambing time, both early and late, was good, particularly so for early lambing flocks; mortality light. A larger proportion of lambs were sold fat off the ewe. The want of keep at the time of the store lamb sales lessened the demand, and prices at first were very disappointing. The maggot-fly was again most troublesome, particularly towards the latter part of the season. Grass cattle fed well and young stock thrived better than the past two seasons; ewe stocks came through a rougher winter and were

not in the same condition as the same time last year. Cattle and sheep were generally clear of disease, though dysentery amongst lambs spreading in the low country and foot-rot was again very troublesome all season. *Clip of Wool*—Quality and quantity above average. *Sugar Beet*—With an acreage practically similar to 1934, and a reduced tonnage and lower sugar content, the returns from this crop were not so favourable. Great difficulty was experienced in getting the latter part of the crop off the land owing to continuous rain. 1935, if dry for the first half, was a fairly normal year with an early and good harvest; the autumn was very wet, and while the early harvest allowed ploughing to be pushed forward, sowing of wheat was held up.

**BERWICKSHIRE (Lammermoor).** *Wheat*—An increased quantity of wheat was again grown; the crop did well with a fairly good yield of both grain and straw. *Barley*—Not much now grown, but where grown did well; yield from 5 to 6 qrs. per acre; seed sown, 3 to 3½ bushels per acre. *Oats*—On the whole a good crop; yield well up to the average, better than last year, 56 bushels per acre; seed sown, 4 to 6 bushels. *Harvest*—Early, about a week earlier than last year. *Hay*—An average crop of good quality, 35 cwt. per acre. *Meadow Hay*—Rather more productive than last year, mostly secured in good condition; yield around 30 cwt. per acre. *Potatoes*—Rather lighter crop than last year; no serious damage by disease; kept well in pits. *Turnips*—Crop much better than last year, brarded well, and very little second sowing required; in some cases finger-and-toe did considerable damage, but taken all over a really good crop; yield about 20 tons. *Insects*—On the whole much less troublesome than last year. *Weeds*—Did not injure the crops to anything like the same extent as last year; the healthy growth of turnips made it possible to get the horse-hoe going in good time to check weeds among the turnip crop. *Pastures*—Well up to average. *Stock*—Throve quite as well as last year. Cattle and sheep on the whole were fairly free from disease; on old pasture lambs were troubled with worms which retarded growth and condition to a rather serious extent. *Clip of Wool*—Rather over the average.

**ROXBURGHSHIRE.** *Wheat*—An increased acreage; owing to the favourable season this crop was being successfully grown on farms not normally suitable for wheat growing. *Barley*—Similar acreage to last year; average yield and quality about 40 to 44 bushels per acre. *Oats*—A good average crop; grain better filled than last year. Poor crops were in most cases due to leaf-stripe. *Harvest*—Began rather earlier than usual, but owing to lodged crops and broken weather, was in many cases protracted. *Hay*—A good average crop of good quality; about 2 tons per acre. *Meadow Hay*—Owing to drought not a very heavy crop, but quality good and mostly well got. *Potatoes*—In most cases a poor crop, though there were some exceptions; yield 6 to 10 tons per acre. *Turnips*—A good crop, about 20 tons; an exceptionally good year for brairding; no resowing required. *Insects*—On the whole crops were not seriously damaged, except in certain cases where early crops of swedes were seriously damaged by the turnip-fly. *Weeds*—No damage. *Pastures*—Were

very good, especially young grass during June and July; later, owing to drought, some fields were badly burnt up. *Stock*—Throve well. Maggot-fly not so numerous as last year; lamb dysentery was a very serious problem; a certain amount of contagious abortion in cows. *Clip of Wool*—A good average.

**SLEKIRKSHIRE.** *Wheat*—None grown. *Barley*—Very little grown; average yield from 30 to 35 bushels per acre. *Oats*—Were sown under ideal conditions; braided well and, with a dry summer, harvested a splendid crop with little or no laid grain; seed sown, 5 to 6 bushels per acre; yield from 35 to 40 bushels per acre, but in higher districts the yield was 10 bushels less per acre. *Harvest*—Began a fortnight earlier than usual, and with the whole crop standing was easily and quickly handled; secured in first-class condition. The weather broke before stacks could be thatched, and there was, in consequence, a considerable wastage on the top of stacks. *Hay*—An excellent crop of splendid quality; about 2 tons per acre. *Meadow Hay*—Was also a very good crop; about 30 cwt. per acre. *Potatoes*—On account of the drought in June and July the yield was considerably less than usual with a big percentage of 'brock'; late potatoes suffered from second growth, weather conditions delayed lifting, and the crop was mostly pitted in a very dirty condition; not much disease. *Turnips*—Were got in good condition; came quickly to the hoe and finished a full average crop, about 20 tons per acre. *Insects*—No damage. *Weeds*—No damage. *Pastures*—Average growth and quality. *Stock*—Throve quite well, and lambs were in better condition than usual when sold. Cattle and sheep were free from disease. *Clip of Wool*—Average clip, of good quality.

**PEEBLES SHIRE.** *Wheat*—Very little grown. *Barley*—Not much grown, but where grown crop threshed from 40 to 44 bushels per acre. *Oats*—On well farmed land and where new varieties were grown an excellent crop from 56 to 60 bushels, and in many cases considerably more; Potato and older varieties, 36 to 40 bushels; on late and poor land, 24 to 30 bushels. *Harvest*—An early harvest, a week earlier than last year; in early districts a good harvest, but the later districts experienced very bad weather. *Hay*—A very good crop and secured in excellent order; 32 to 40 cwt. per acre; but in poor districts, 20 to 28 cwt. *Meadow Hay*—Much the same as usual; quality good. *Potatoes*—The crop generally was not an average one, round about 6 tons per acre dressed ware, but in some places dressed out 10 tons; free from disease and quality excellent; Kerr's Pink was the most popular variety. *Turnips*—Swedes a very big crop; 40 tons, free from disease, and kept very well; yellows also good and made great progress after rain came; crop braided well and came to the hoe very quickly, and in most cases first sowing was sufficient. *Insects*—No serious damage. *Weeds*—None. *Pastures*—Of average growth and quality, but suffered from want of rain. *Stock*—Both cattle and sheep did very well; but in some districts sheep again suffered terribly from maggot-fly. Cattle and sheep free from disease. *Clip of Wool*—Quality good, and clip above average.

## DUMFRIES DISTRICT.

**DUMFRIES (Annandale).** *Wheat*—The acreage considerably increased during the last two years and this cereal has now taken the place of barley. The yield was good, but the quality, owing to heavy rain during harvest, was not up to that of last year; the grain was rather discoloured. Yield: grain, 50 bushels per acre; straw, 40 cwt. per acre; seed sown,  $3\frac{1}{2}$  bushels per acre. *Barley*—None sown. *Oats*—Acreage about the same as last year. Yield: grain, 40 bushels per acre; straw, 26 cwt. per acre; seed sown,  $3\frac{1}{2}$  to  $6\frac{1}{2}$  bushels. Sowing began about 6th March and was completed under very favourable conditions; heavy rains about the end of March put the red land in rather a sodden state, and consequently oats were sown in rather poor soil conditions. The braird came away well, the weather during April and May being ideal. *Harvest*—Very dry weather set in during June and continued well into July, with a result that harvest was quite a fortnight earlier than last year. It started in the earlier districts in July and was general by the first week in August. The weather was very favourable for the first fortnight and a good proportion of the crop was secured in excellent condition, but heavy rains towards the end of the month held up operations for many days and the remainder of the crop was got in rather poor condition. The grain was badly discoloured, and on low-lying farms there was a good deal of sprouting in the stocks. Harvest finished about the 10th September. *Hay*—An average crop, was secured under good conditions, and the quality was very good. Yield 30 cwt. per acre. *Meadow Hay*—A good crop, rather above the average both as to quality and yield; 26 cwt. per acre. *Potatoes*—Weather was very favourable and an excellent crop of good quality, free from disease, was secured in good condition. Yield 7 tons per acre. *Turnips*—Crop well above the average. Sowing began about 20th April and those early sown gave by far the best crop both for quality and yield. Very little second sowing was necessary and the plants came quickly to the hoe. There was plenty of time for horse-hoeing and second hand-hoeing before hay time, with a result that a very good crop of clean sound turnips was seen in nearly all districts. Yield 20 tons per acre. *Insects*—Very little damage done. The oat crop was practically untouched by grub or wire-worm. *Weeds*—The dry summer favoured the cleaning of land and all crops were more free from weeds than usual. *Pastures*—During the early summer pastures were good, but the dry spell during June and July was severe on light land. Many fields were badly burnt and did not recover until late in the season. *Stock*—All kinds did well, in spite of the drought. Fat cattle and lambs were turned off in good condition just as early as last year. Disease, especially among sheep, was below the average. The dry summer seemed to check the ravages of fluke. Grass sickness in horses was rather below that of last year. *Clip of Wool*—Above the average both for quality and quantity.

**DUMFRIES (Nithsdale).** *Wheat*—None grown. *Barley*—None grown. *Oats*—Crop well got; threshed slightly better than last year. *Harvest*—General by end of August, nearly a fortnight earlier

than last year. *Hay*—Filled up well and ended a good crop ; got in perfect order. *Meadow Hay*—About the same as last year, and got in perfect condition. *Potatoes*—About 5 tons per acre ; fairly free from disease. *Turnips*—A good crop in some places ; about 20 to 22 tons ; braided slowly on some farms ; a little resowing owing to drought ; more disease than usual. *Insects*—Not much trouble with turnip-fly. *Weeds*—Crops were free from weeds. *Pastures*—Drought affected pastures considerably ; not nearly so abundant as last year. *Stock*—Did well on pastures. In some cases a little artificial feeding had to be given to cows. Cattle and sheep fairly free from disease. *Clip of Wool*—Good quality, a little heavier than last year.

DUMFRIES (Eskdale). *Wheat*—None grown. *Barley*—None grown. *Oats*—Good average crop ; 35 to 40 bushels per acre ; seed sown, about 6 bushels per acre of the heavy oats and about 5 bushels per acre of Potato ; "Ceresan" dressing of the seed, especially for the heavy varieties, showed good results. *Harvest*—Began about the same time as last year in most places, but in the late districts harvest was later, and owing to broken weather crops were harvested in very bad condition. *Hay*—Lighter crop than last year ; about 30 to 32 cwt. per acre, but all got in very good condition. *Meadow Hay*—Rather lighter than last year ; about half was got in good condition ; the other half was got in very middling condition owing to broken weather. *Potatoes*—About the same as last year ; a good deal of disease ; the weather all autumn was very wet and greatly affected the crops, and it was with great difficulty that potatoes were got off the land as there was hardly a dry day during lifting. *Turnips*—Heavier crop than last year ; braided fairly well, although a lot of resowing was necessary ; crop, however, finished up good at the end. *Insects*—Very little damage by insects, less than usual. *Weeds*—Very little injury from weeds, much less than usual. *Pastures*—Full average growth ; quality better than last year. *Stock*—Did very well on pastures. Both cattle and sheep very free from disease ; hogs inoculated with braxy vaccine very successful. *Clip of Wool*—Sheep clipped very well ; rather above the average quality.

KIRKCUDBRIGHTSHIRE. *Wheat*—Owing to the subsidy more wheat was grown, and good weather enabled a profitable crop to be harvested. *Barley*—Very little grown. *Oats*—Showery weather in June caused the oat crop to develop into a very good bulk of straw, and due to the fine weather in July and August the ears filled well. Harvesting was general in the first week of August and most of the crop was in the stack by the end of the first week of September. It threshed above the average, and 60-bushel crops were the rule rather than the exception. Potato varieties were mostly grown. *Harvest*—A record early harvest ; many farms on the shore began in July, and for over two weeks neither dew nor rain impeded the cutting, and stacking was completed by the 10th September. *Hay*—Ryegrass hay was not so bulky where early cut ; May was a dry month and at 1st June the outlook was poor, but showery weather improved the bulk surprisingly ; excellent weather prevailed for rickling. *Meadow Hay*—About average crop ; a lot of it remained

in the rick throughout harvest, but did not suffer much on that account. *Potatoes*—Got a severe check owing to severe frost on 15th and 16th May, but turned out a decent crop of 8 to 10 tons per acre and free from disease; Kerr's Pink and Majestic were principally grown as main crops. *Turnips*—On the average under 20 tons per acre; the autumn was too dry to make the plants swell out; early sown crops were badly frosted on 15th and 16th May and had to be resown, but came away well in June; on light land mildew in the autumn affected the health of the crop and raan was very prevalent. *Insects*—Not much damage done by insects, with the exception of the swede-midge in the autumn. *Weeds*—Good weather enabled weeds to be kept down in the green crop. *Pastures*—Were very fine early in May, but later, frost and heat caused growth to stop, resulting in great scarcity of grass in the late summer and autumn. *Stock*—Did well, except fat cattle; on some farms the cattle had to get new hay put out to them in August as the fields were very bare. Cattle and sheep were free from disease. *Clip of Wool*—Average.

WIGTOWNSHIRE. *Wheat*—Very little grown. *Barley*—Very little grown. *Oats*—Lea oats, 38 to 40 bushels per acre; oats after green crop, 46 to 48 bushels per acre; seed sown—Potato oats, 5½ to 6 bushels per acre broadcast, 3 to 5 bushels per acre where drilled; large varieties, 7 to 8 bushels per acre. Where "Ceresan" was used with Potato oats, 3 to 3½ bushels per acre did quite well. Good weather was generally experienced at seeding time and the seed bed was dry. The braird was good and did well after some heavy rain in April. The summer set in dry and continued, thus checking the growth of straw, which was of good quality, though it turned out to be a very short crop. *Harvest*—Started earlier than last year, in many cases a week earlier, and on early land a good amount was in the stock by the 10th August. Generally speaking good weather was experienced throughout the harvest; with so much standing it was very easily cut; oats were stacked in fine condition and for the most part were of good quality and colour; very little oats were outwith the stackyards by the middle of September even on late land. *Hay*—Was got in very good condition. The quality was first class, some farmers considered it was better than the good crop of 1934; yield about 35 cwt. per acre. *Meadow Hay*—Was less productive. *Potatoes*—Earlies were somewhat retarded by two nights' frost in May, and when digging started turned out a very light crop, but improved later up to 8 to 10 tons; Epicures were mostly planted. Late potatoes were a fairly good crop in some places, but in others poor. On many farms crops were late in being lifted, due to continuous wet weather; yield 8 to 10 tons. *Turnips*—12 to 16 tons per acre; the braird was very varied; early sown turnips came away well, but on some land later sown turnips were slow to braird; land, unless worked just before drilling and sowing, got extremely dry; owing to frost and dry weather a great deal of resowing took place, and in many cases this was not very successful; turnips on late land better than turnips on early land; owing to the dry summer mildew was prevalent. Raan was very prevalent. A dressing called "Terravit," now on the market, counteracts this disease and appears to be effective. A moderate season for turnips. *Insects*—Turnip-fly

was a pest on some farms, but the damage was less than usual. *Weeds*—Redshank was hardly so prevalent in turnips as in the previous year; docks showed no decline, in fact, seemed to be on the increase; other weeds were kept in check fairly well. *Pastures*—On light land grass was scarce nearly all summer, and although heavy land kept a better cover it got eaten down later on; the countryside was more bare of grass in May than had been seen for a long time. *Stock*—Did fairly well, but from August onwards the decline in the quantity of milk was very marked, and hand feeding was general; in a majority of cases the milk yield was less than the previous year; owing to the extremely dry summer there was a shortage of water for all classes of stock. There were some cases of grass sickness among horses and a good number of foals died from navel ill; in some places calves suffered from hoose; sheep appeared to be fairly free from disease. *Clip of Wool*—Quality up to the average; weight a little above an average.

#### GLASGOW DISTRICT.

**AYRSHIRE.** *Wheat*—46 bushels per acre of good quality, 63 lb. per bushel; straw 26 cwt. per acre; seed sown,  $2\frac{1}{2}$  to 3 bushels per acre. *Barley*—Practically none grown. *Oats*—50 bushels per acre, excellent quality, 40 lb. per bushel; straw, 24 cwt. per acre; seed,  $5\frac{1}{2}$  to 7 bushels per acre. *Harvest*—Began ten days earlier than usual, about the beginning of August. *Hay*—Ryegrass was a very light crop, about 22 to 25 cwt. per acre, but was secured in very good condition. *Meadow Hay*—Was a moderate crop of good quality. *Potatoes*—4 to 5 tons per acre; the smallest crop for many years; the quality was, however, good and there was no disease; a new variety, "Doon Early," was grown in small quantities and with quite good results. *Turnips*—The crop braided well, but the excessive drought hindered growth, and mildew developed to such an extent that the crop never recovered; a very small crop, 12 tons per acre, was considered a good yield; mangolds were, however, a very good and sound crop. *Insects*—The long continued dry weather tended to aggravate the amount of damage done by the usual insect pests. *Weeds*—Annuals were not much in evidence until rain came in August, when they grew with such rapidity that young seeds were in some cases smothered. *Pastures*—Were never rough; in some cases it was not easily understood how stock subsisted, but they nevertheless made good progress on the whole. Cattle and sheep free from disease. *Clip of Wool*—Average in bulk and quality.

**BUTE.** *Wheat*—None grown. *Barley*—None grown. *Oats*—A good crop, cut in fine order, mostly by binder; well got in; threshed better than last year; seed, 5 to 6 bushels per acre, according to variety. *Harvest*—Began earlier than usual; crops were easily got in as the weather was good; kept extra well in the stacks. A few late farms were caught by bad weather; these crops were not so good as those harvested earlier. *Hay*—Was again a short crop; generally there was more clover than had been for a year or two; it was of good quality; yield, however, would not be more than 1 to  $1\frac{1}{2}$



tons per acre. *Meadow Hay*—Not much grown; had an unfavourable season, which made the quality bad. *Potatoes*—"Epicures" were earlier than last year; began digging this year on 7th June; the crop was again good—7 to 8 tons per acre. "Kerr's Pink" was not such a good crop as last year. Very little disease. *Turnips*—Crop was again very irregular; yield, 20 to 25 tons per acre; braided well; very little resowing. *Insects*—No damage. *Weeds*—No injury; crops were easily kept clean. *Pastures*—Finished up a little better than usual. *Live Stock*—Did well on the pastures, and came in in good condition. Cattle and sheep have been free from disease. *Clip of Wool*—An average clip of wool quality.

ARRAN. *Wheat*—None grown. *Barley*—None grown. *Oats*—A good crop generally, and secured in good condition with a yield of about 32 bushels per acre, weighing up to 45 lb. per bushel; seeding was about 6 bushels per acre. *Harvest*—Began about eight days earlier than last year, and crop was secured in a much better condition than in previous years. *Hay*—Crop on the lower farms was good with a yield of over 2 tons per acre, but on the higher farms not so good, yield from 20 to 30 cwt. *Meadow Hay*—Not a great deal grown. *Potatoes*—Yield was little better than last year; many farmers are now sprouting their seed, which is a great advantage, with the result that crops from 6 to 7 and even 8 tons per acre were quite common. Arran seed was in good demand. *Potatoes* were very free from disease. New varieties still being raised, giving much promise. *Turnips*—Crop rather varied, a lot unsound in centre, which is becoming very common; many small farms have given up growing for that reason; very little resowing. There was also much damage by wood pigeons. *Insects*—Not very bad. *Weeds*—No damage where properly handled. *Pastures*—Were good, and are increasing in quality yearly, as farmers are using ground lime shell on their "sown-out," resulting in great increase of good pastures. In view of the fact that the cost of lime shell is high, it showed great courage for the small farmers to spend money on lime at the present time. Cattle still improving in type and quality. Sales are now held in spring, summer, and autumn, and good prices were obtained. No cases of disease were reported, but the "tick" was very troublesome on some farms. *Wool*—The clip of wool was much the same as that of the previous year.

LANARKSHIRE (Upper Ward). *Wheat*—Only small quantities grown. *Barley*—None grown. *Oats*—60 to 70 bushels per acre; quality of straw and grain very good. *Harvest*—Was early; began end of August and crops were extra well secured. *Hay*—35 to 45 cwt. per acre, a lighter crop than last year; owing to excellent weather was well secured. *Meadow Hay*—A much lighter crop than usual, but well secured. *Potatoes*—5 to 8 tons per acre, about 3 tons per acre less than last year owing to want of rain in midsummer; no disease; no new varieties planted. *Turnips*—15 to 30 tons per acre; an excellent crop, much better than last year; there was a good braird, and very little resowing required. *Insects*—No damage. *Weeds*—Easily kept in check, due to good weather. *Pastures*—Were bare during midsummer, but recovered

greatly in September; on the whole were not so good as last year. *Stock*—Throve fairly well. Cattle and sheep were free from disease. *Clip of Wool*—Average clip.

**LANARKSHIRE** (Middle and Lower Wards). *Wheat*—40 to 44 bushels per acre; straw, 25 to 30 cwt. per acre; quality of grain and straw good, much better than 1934; seed sown, mostly English, 3 bushels per acre; Scots,  $3\frac{1}{2}$  to 4 bushels. *Barley*—None grown. *Oats*—55 to 60 bushels per acre; straw, 25 cwt. per acre; quality of grain and straw good, superior to last year; seed sown, 6 to  $6\frac{1}{2}$  bushels per acre. *Harvest*—Began during the second week of August, about same date as the previous year. *Hay*—First cut ryegrass, 35 to 40 cwt. per acre; quality good. *Meadow Hay*—40 to 45 cwt. per acre; generally well got and quality good. *Potatoes*—8 to  $8\frac{1}{2}$  tons per acre, slightly less than last year; disease prevalent on heavy land and commenced previous to lifting the crop. Where crop was free from disease the quality was good. No new varieties planted. *Turnips*—Generally a good crop, much superior to last year; yield 20 to 25 tons per acre; crop braided evenly and resowing was not found necessary. *Insects*—No damage by insect pests. *Weeds*—Owing to the favourable season weeds were easily destroyed, and no damage resulted to the growing crops. *Pastures*—The grazings were good during the early part of the season, but fell off rapidly in the autumn. *Live Stock*—Both cattle and sheep did well in the early part of the year, but fell away in the autumn, much earlier than usual. This applied particularly to dairy cows. Cattle and sheep were fairly free from disease, but, like 1934, the season was a bad one for maggots, although not quite so bad as that year. *Clip of Wool*—Generally speaking the clip was up to the average, both as regards quality and quantity.

**RENFREWSHIRE.** *Wheat*—Average crop of both grain and straw; quality good; grain about 25 cwt. per acre (42 bushels); straw about 30 cwt. per acre; seed sown, 3 to 4 bushels. *Barley*—None grown. *Oats*—Average crop; on lighter land straw short on account of dry summer; quality fair with later harvests and good with earlier harvests; grain about 20 cwt. per acre (54 bushels); straw between 20 and 25 cwt. per acre; seed sown, about 5 bushels. *Harvest*—Commenced about 12th August; weather favourable until end of month, thereafter rather broken; on most arable farms crop was all secured by middle of September, but on higher lying places odd fields of grain still remained to be carted in after that date. *Hay*—Crop under average owing to dry weather and the increasing habit of grazing sheep on seeds and hay stubble during winter and spring; quality fair to good; yield 25 to 35 cwt. per acre according to district; timothy, 60 cwt. per acre, although now not much grown. *Meadow Hay*—Very little grown. *Potatoes*—Variable yields; some plots of Second Earlies frosted with a consequent reduction in yield. Spraying against blight is increasing in the main potato growing districts, with satisfactory results. Good weather for hoeing, therefore not much trouble from weeds; weather at pitting time worst on record and many complaints of potatoes rotting in pits; yields: Second Earlies, 7 to 9 tons per acre; heavier yielding main crops, 8 to 13 tons; and Golden Wonder, 7 to 10 tons. *Turnips*—Again

variable yields, due to late May frosts and subsequent dry weather; keeping qualities much damaged by autumn rains; yield 15 to 25 tons per acre according to district. Several braids were harrowed out and resown on account of frost. This, however, proved to be unnecessary where odd drills were left as an experiment. *Insects*—Increasing ravages from frit-fly, though this is not sometimes recognised; many farmers attributed the light and barren ears of the oat crop to attacks of sparrows. *Weeds*—A favourable spell for hoeing operations kept weeds well in check. *Pastures*—Suffered severely from the cold winds in April and the severe frosts in May. There was more grass in February than in May. *Live Stock*—Throve only moderately well, due to scarcity of grass and the extremes of weather, drought in summer and deluge in autumn. Cattle and sheep were generally free from disease, although the former were much troubled by clegs and warble-flies, and the latter by maggot attacks. *Clip of Wool*—Below average; quality good and price improved on previous year.

ARGYLLSHIRE (Lochgilphead). *Wheat*—Practically none grown. *Barley*—None grown. *Oats*—A very good crop; threshed better than last year; grain, 30 to 40 bushels per acre; straw about 25 cwt. per acre; seed, 5 to 6 bushels according to variety. *Harvest*—Began at the usual time. *Hay*—A light crop owing to deficiency of rain in spring and early summer; quality good, about 1 ton per acre. *Meadow Hay*—Was about the same as last year. *Potatoes*—A good crop, about 8 tons per acre. There was much delay and difficulty in lifting the crop owing to wet weather; no disease. *Turnips*—Very fair crop, about 20 to 25 tons per acre; brairding was slow owing to dry weather in May and June; there was some resowing. *Insects*—No injury to any extent. *Weeds*—Were well kept down in the early summer. *Pastures*—Became rather bare in June, but later came away and lasted out well. *Live Stock*—Throve very well. Cattle and sheep were free from disease, although maggots were troublesome during July and August. *Clip of Wool*—About an average.

ARGYLLSHIRE (Kintyre). *Wheat*—Only a few acres grown in the district; mostly fed to poultry; yield much the same as previous year, 40 bushels per acre. *Barley*—Very little grown, mostly bere; straw lighter than last year, but grain higher on the better soils, rather lower on light dry soils; yield 40 to 48 bushels per acre; quantity of seed sown about 4 bushels per acre. *Oats*—As in the case of barley, bulk of straw rather lighter than preceding year by about 5 cwt. per acre; yield of grain extremely good and above that of 1934, which was also a good crop; yield of grain reported as high as 35 cwt. per acre; average, good crops about 24 cwt. per acre; average all over the district about 18 cwt. per acre; seed sown, from  $4\frac{1}{2}$  to 6 bushels per acre according to variety sown and method of sowing; generally seed was dressed with "Ceresan" or similar dressing. *Harvest* of bere began unusually early, cutting commenced in the earliest crops at the end of July; harvesting of the oat crop was general about second and third weeks of August; a noticeable feature was irregularity in the crops of the district in coming to the harvesting stage. *Hay*—Crop scarcely so heavy as that of pre-

vious year, and on light soils decidedly smaller; average about 30 cwt. per acre, with best yields up to 60 cwt.; generally secured in very good condition; clover about an average. *Meadow Hay*—Rather less productive than preceding year. *Potatoes*—All over, scarcely as good a crop as last year; average yield about 7 to 7½ tons per acre; no new varieties planted; rather more blight evident at harvesting of crop; lifting of tubers very much delayed by reason of persistent wet weather in the autumn. *Turnips*—Again very irregular yields, varying from 16 tons to 34 tons per acre; average in neighbourhood of 23 tons per acre; crops generally very slow to braird; drought, late frost, and fly attack caused the total failure of the first sowing in some instances; after the frosts disappeared the brairds made headway despite the continued drought; singling of the plants delayed a week or ten days to a fortnight beyond usual time. *Insects*—Turnip-fly severe in some cases, and generally this insect attracted more attention than usual; attack by aphides noticeable in some crops during the dry weather of late summer and early autumn; damage to bulbs by game and rabbits abnormally pronounced in late winter; damage by root-maggot about an average. *Weeds*—Generally the crop was fairly clean of weeds; chief weeds observed were redshank, chickweed, and spurrey. *Pastures*—Slow and backward in late spring and early summer; sudden and vigorous burst of clover in second week of June onwards; an average grazing on heavier lands, but under average on light soils owing to effect of dry season; pastures fell off rather quickly during late autumn and early winter. *Live Stock*—Did well on pastures during mid-summer to mid-autumn; dairy and fat stock, however, went back in condition on pastures in the late autumn and early winter and therefore required more concentrates than usual; milk yields throughout season about an average, except on light land; yields towards end of lactation period fell away rather more abruptly than usual. About an average bill of health; mastitis prevalent in dairy herds; several cases of death amongst cattle considered to be due to bracken poisoning; lamb dysentery bad on one local farm; damage by sheep-maggot scarcely so bad as in previous two years. *Clip of Wool*—Average quality and quantity.

ARGYLLSHIRE (islands of Islay, Jura, and Colonsay). *Wheat*—None grown. *Barley*—None grown. *Oats*—Good crop, 34 bushels per acre, 35 lb. per bushel; straw light; seed sown about 5 bushels per acre. *Harvest*—Began exceptionally early; on the larger farms commenced on 1st August and was completed by 30th August; wet and stormy weather in September made completion of harvest difficult on smaller farms and crofts, but on the whole crops were well secured. *Hay*—Similar to last year, about 1 ton 2 cwt. per acre. *Meadow Hay*—Crop similar to last year. *Potatoes*—Slightly below last year, about 7 tons to the acre; a little disease in late liftings, probably due to soggy condition of ground; no new varieties planted. *Turnips*—A great improvement on last year; yield about 16 tons per acre; crop brairded well and a second sowing was only necessary in a few isolated cases where sowing had been done during a hot dry fortnight. *Insects*—No injury from insects. *Weeds*—No undue injury by weeds. *Pastures*—Were in excellent condition throughout season. *Live Stock*—Throve well, and it was possible to leave

housing animals out until a late date. Cattle and sheep kept fairly free from disease; maggot trouble was much less prevalent than last year. The dry weather in July and August was accompanied with a good deal of wind, and this seemed to improve conditions so far as damage by maggots was concerned. *Clip of Wool*—Average clip of wool.

#### STIRLING DISTRICT.

DUMBARTONSHIRE (Upper). *Wheat*—None grown. *Barley*—None grown. *Oats*—Were lighter as regards straw, but grain was better; 6 bushels sown. *Harvest*—Began about a fortnight earlier than usual time. *Hay*—Ryegrass hay was lighter than last year, but quality very good. *Meadow Hay*—Was much lighter than last year, but was got in very good order. *Potatoes*—Were a fair crop, about 7 tons per acre; hardly any disease; no new varieties planted. *Turnips*—A good yield, but quality was not so good; good braird; no resowing necessary. *Insects*—No damage by insects. *Weeds*—No damage by weeds. *Pastures*—Were good all the season. *Live Stock*—Throve very well on the whole, though lambs had a set-back between the two clippings. Cattle and sheep were free from disease. *Clip of Wool*—An average clip.

DUMBARTONSHIRE (Lower). *Wheat*—The yield of grain was about 42 bushels per acre, and the quality was very good; straw was rather less bulky, yield about 26 cwt. per acre; rate of seeding, 4 bushels per acre. *Barley*—None grown. *Oats*—Were not so bulky as in 1934, but the yield of grain was better, averaging about 50 bushels per acre at 41 lb. per bushel; straw about 25 cwt. per acre; seed sown, 5½ bushels per acre. *Harvest*—For the third year in succession a very early harvest, commencing about 14 days earlier than usual. *Hay*—Ryegrass and clover were not quite so heavy as last year, yielding about 34 cwt. per acre; quality was excellent. *Meadow Hay*—Was rather better than last year, and was much better secured. *Potatoes*—Yield was about 1 ton per acre less than last year. There was very little disease; no new varieties planted. *Turnips*—Were poor; cold dry weather at sowing time gave the crop a bad start and resowing was necessary in many cases; yield was about 13 tons per acre, a little less than last year; quality was only fair. *Insects*—Crops on the whole were free from insect pests, except that the turnip-fly was troublesome. *Weeds*—Were not very troublesome, but thin crops of oats were affected with charlock, and spurrey was present in the late brairds of swedes. *Pastures*—Were very bare during the early grazing season, but towards midsummer and afterwards they became abundant. *Live Stock*—Grazing stock, owing to the cold bleak weather in May and early June, made little progress until midsummer; thereafter both cattle and sheep did very well. Back-calving dairy cattle suffered from an acute form of mastitis during August and September; otherwise there was very little disease among stock. *Clip of Wool*—Above the average.

STIRLINGSHIRE (West). *Wheat*—Hardly so good as last year; about 13 cwt. per acre; seed, 4 bushels per acre. *Barley*—None grown. *Oats*—Well got; threshed rather better than last year; about 15 cwt. per acre, but less straw; seed, 4 to 7 bushels. *Harvest*

—Began about ten days earlier than usual. *Hay*—Rather lighter than last year; about 25 cwt. per acre; very good quality. *Meadow Hay*—Lighter crop than last year, but very good quality. *Potatoes*—Lighter crop; about 7 tons per acre; a little disease showing in October, but did not increase in the pit; no new varieties planted. *Turnips*—A good crop; about 20 tons per acre; good braird and no resowing. *Insects*—Less damage than usual. *Weeds*—Rather bad on heavy land where sown early. *Pastures*—Were up to average. *Live Stock*—Throve very well. Cattle and sheep were free from disease. *Clip of Wool*—Quite up to average.

**STIRLINGSHIRE (East).** *Wheat*—About 42 bushels per acre; good quality; straw about 25 cwt. per acre. *Barley*—28 bushels per acre; fair quality; straw about 18 cwt. per acre. *Oats*—A good crop; about 50 bushels per acre; straw about 20 cwt. per acre. *Harvest*—Began a little earlier than usual. *Hay*—An average crop, well secured; ryegrass about 30 cwt. and timothy 45 cwt. per acre. *Meadow Hay*—Fair average crop and well secured. *Potatoes*—Rather under average crop; usual varieties planted. *Turnips*—Swedes and yellows rather under average; improved in late autumn. *Insects*—About the usual damage. *Weeds*—None. *Pastures*—Quite a good season for grass. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—Average clip, of good quality.

**CLACKMANNANSHIRE.** *Wheat*—A good crop, brairded well and ripened evenly; yield, 38 to 40 bushels per acre; straw, 28 to 30 cwt.; seed, 4 to 5 bushels per acre. *Barley*—None grown. *Oats*—A good crop, ripened well, colour good; was harvested in good condition; 30 to 40 bushels per acre; average weight, 38 to 40 lb. per bushel. *Harvest*—Began about a fortnight earlier than usual, and crops ripened very rapidly. *Hay*—A good crop; 2 to 2½ tons; secured in good condition. *Meadow Hay*—A good crop, much the same as last year. *Potatoes*—Kerr's Pink, 9 to 10 tons, no disease; Golden Wonders, 8 to 9 tons, and quality very good; kept well in the pits. *Turnips*—Yield, 20 to 30 tons; brairded fairly well; the quality in most cases good; finger-and-toe in some cases, and dry-rot in others; only one sowing required. *Insects*—The turnip-fly was not so bad as in past years; damage was less than usual. *Weeds*—The damage by weeds was less than usual. *Pastures*—Owing to the dry weather the pastures were rather burned up; dairy cows had to be fed with additional food while on the grass to keep up milk yield. *Live Stock*—Stock were healthy. Cattle and sheep were free from disease. *Clip of Wool*—A fair average clip.

**PERTHSHIRE (Western).** *Wheat*—A very good crop, about the same break as last year; 40 to 42 bushels per acre; harvested in good condition. *Barley*—Very little grown. *Oats*—An average crop, 5 to 6 qrs. per acre. *Harvest*—Started on 9th August, a week earlier than last year; mostly finished about the end of September; crop secured in good condition; some late farms had a bad finish and crops secured in very poor order. *Hay*—On the whole a very good crop, 2 to 2½ tons per acre; a poor crop on light land, 1 ton per acre; all got in splendid condition. *Meadow Hay*—Under average, but mostly well got. *Potatoes*—Very much under average; 4 to 5 tons per acre and mostly small in the run; very little disease.

*Turnips*—An extra good crop of grand quality; yellows, 15 to 20 tons per acre; swedes, 20 to 25 tons per acre; braided well and no second sowing required. *Insects*—No damage by insects. *Weeds*—No damage by weeds. *Pastures*—Grass plentiful, of good quality. *Live Stock*—Did extra well. Cattle and sheep free from disease. *Clip of Wool*—An average clip, of good quality.

#### PERTH DISTRICT.

**FIFESHIRE** (Middle and Eastern). *Wheat*—Above average; a very good crop of excellent quality; 40 bushels per acre; straw, 30 cwt. per acre; seed sown, 3 to 4 bushels. *Barley*—Variable, about an average crop; 36 to 48 bushels per acre; there were some very good crops of excellent quality; others moderate both for quality and quantity; seed sown,  $3\frac{1}{2}$  bushels. *Oats*—About average crop; 40 to 48 bushels per acre; quality good; seed sown, 4 to 6 bushels. *Harvest*—Began usual time, second week of August; weather was showery and broken, but crops were all got in excellent condition about four weeks from starting. *Hay*—Crop was the largest for many years; both ryegrass and clovers plentiful; at least 2 tons per acre, in many cases 3 tons per acre; quality good; most of it stacked in excellent condition. *Meadow Hay*—None grown. *Potatoes*—Yield less than last year and much below average; about 5 tons per acre of ware potatoes; not much disease, but great difficulty in securing crop owing to wet weather in October. *Turnips*—Swedes a fair crop owing to good growing weather in autumn and early winter; average crop about 20 to 25 tons; yellow turnips fairly good; swedes mostly grown. *Insects*—Not more than usual damage by insects. *Weeds*—Not more than usual injury. *Pastures*—Were very good, both for quantity and quality. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—Average clip. *Sugar Beet*—The total acreage grown in the county of Fife in 1935 was 3766 acres, but would have been larger had it not been for Government restriction. The tonnage per acre and the sugar percentage were both lower than last year, being slightly less than 8 tons per acre and 16.5 per cent sugar content. Weather conditions affected the crop, being too dry in early summer and too wet in autumn; general satisfaction, however, was expressed.

**FIFESHIRE** (Western). *Wheat*—The season again favoured the wheat crop; grain and straw were of good quality; yield of grain, 34 to 42 bushels per acre; seeding,  $3\frac{1}{2}$  to 4 bushels per acre; a very much larger acreage of wheat was grown. *Barley*—Of good quality where well secured, but in later districts was discoloured owing to unfavourable weather; yield 32 to 38 bushels per acre; straw of average quality and weight; seeding, 3 to 4 bushels per acre. *Oats*—A fair average crop, yield 48 to 56 bushels per acre; straw good quality and of average weight; much of the crop in the later districts was damaged by rain, which fell in the latter part of harvest; seeding, 5 to 6 bushels per acre. *Harvest*—Commenced during the second week of August, and was general by the end of that month; the work was retarded during September by broken weather. *Hay*—Crop secured in ideal weather conditions; average yield 2 to 3 tons per acre. *Meadow Hay*—Likewise secured in good order; average yield.

*Potatoes*—Average yield of good quality, 6 to 7 tons per acre; crops free from disease; no new varieties planted. *Turnips*—A very much improved crop compared with the previous year; yield above the average weight; crops braided early, and no second sowings reported; some of the earlier sown crops were inclined to shoot. *Insects*—Crops on the whole were free from disease and insect pests. *Weeds*—Skellocks in some oat crops gave trouble, otherwise other annual weeds of little account. *Pastures*—Of good feeding quality, and were sufficient for requirements. *Live Stock*—Stock thrived well. Cattle and sheep free from disease, but maggot-fly again troublesome. *Clip of Wool*—Average clip of good quality.

**PERTSHIRE (Eastern).** *Wheat*—Showed a slight increase in acreage and was a good crop; threshed well, about 42 to 48 bushels per acre; seed, 4 to 5 bushels per acre. *Barley*—An average crop; acreage decreasing; only early harvested samples were good owing to broken weather at harvest; 36 to 38 bushels per acre; seed, 3 to 4 bushels. *Oats*—A very fine crop and mostly standing owing to the absence of heavy rains in June and July; 40 to 48 bushels per acre; seed, 4 to 6 bushels per acre. *Harvest*—Began very early, 30th July; the weather was ideal for about a fortnight, but afterwards very broken; in later districts harvest was not finished until the latter end of October. *Hay*—Ryegrass an excellent crop, above the average; secured in very good condition; yield 30 to 50 cwt. *Meadow Hay*—Very little grown. *Potatoes*—Yield 7 to 10 tons per acre, slightly better than last year; slight disease in the second early varieties; a few acres of Gladstones were grown. *Turnips*—Swedes were an average crop, 30 to 35 tons per acre. The crop braided quite well, but growth was slow during July owing to very dry weather. A quantity suffered late in the season owing to severe frost; very little resowing. *Insects*—No damage by insects. *Weeds*—No damage by weeds. *Pastures*—To begin with suffered by early frosts, and later, owing to drought, foggage was poor. *Live Stock*—Throve fairly well. Cattle and sheep free from disease. *Clip of Wool*—Average clip.

**PERTSHIRE (Central).** *Wheat*—Acreage sown about the same as last year; yield about 44 bushels per acre; crop well got; not usually a wheat-growing district, but the subsidy and the low price of oats have caused more wheat to be sown. *Barley*—Very little grown; yield 44 bushels per acre; average weight 52 lb. per bushel; crop well got. *Oats*—About the same acreage as last year; yield above average, 44 to 50 bushels per acre; straw a good average; mostly well got. *Harvest*—Began second week during August and finished third week of September. *Hay*—Extra good crop, 40 to 50 cwt. per acre; of very fine quality and well got. *Meadow Hay*—Average crop; early cut well got, but later cut was not quite so good. *Potatoes*—Yield very much less than last year; average 6 tons per acre; no disease; mostly lifted in bad condition owing to wet weather. *Turnips*—An extra good crop of grand quality; yellows, 14 to 20 tons; swedes, 20 to 25 tons; crop braided well; no second sowing required. *Insects*—No damage to crops by insects. *Weeds*—Crops free from weeds. *Pastures*—Average growth and of good quality. *Live Stock*—Stock did extra well. Cattle and sheep were free from disease. *Clip of Wool*—An average clip of wool.



**PERTHSHIRE** (Highland). *Wheat*—Not generally sown, but a few acres grown on some farms for the benefit of the subsidy; results as to exact yields not definitely ascertained. *Barley*—Only small patches grown for stock; weighed light. *Oats*—An average crop, with straw of good quality; natural weight about 42 lb. per bushel; 6 bushels per acre sown on an average. *Harvest*—Began in the middle of August, about a fortnight sooner than usual, and in most cases was completed by the middle of September. *Hay*—A fair crop, well secured; 30 cwt. per acre. *Meadow Hay*—A good crop and better got than in the previous year. *Potatoes*—A light crop; ingathering protracted owing to wet weather; yield about 5 tons per acre. *Turnips*—An average crop; braided well, but owing to dry weather in early summer did not make much progress till late in the season; yield about 15 tons per acre. *Insects*—No damage. *Weeds*—Very few weeds. *Pastures*—Of average growth and quality. *Live Stock*—Throve well. Cattle and sheep free from disease. *Clip of Wool*—A good average clip of fine quality; weather conditions fine during clipping season.

**ANGUS** (Western). *Wheat*—Yield 36 bushels; quality of grain and straw good; seed, 3 to 4 bushels drilled. *Barley*—40 bushels; grain and straw of good quality; 3 to 4 bushels seed drilled. *Oats*—56 bushels; good quality, with abundance of straw, which was also of good quality; seed, 4 to 7 bushels according to variety and district. *Harvest*—Began early, and all grain was secured in good order. *Hay*—About 2 tons per acre; quality was good, both as regards ryegrass and clover. *Meadow Hay*—Very little grown. *Potatoes*—6 tons 10 cwt. per acre; not so heavy as last year; very little disease, but some later lifted were slightly damaged by frost; no new varieties planted. *Turnips*—18 tons per acre; some very heavy crops of swedes; yellow turnips heavier than last year; the crop braided well; very little resowing. *Insects*—Very little damage by insects of any kind, less than usual. *Weeds*—Not more than usual damage. *Pastures*—Grass did well, but pastures were very bare towards end of November. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—Hardly up to average.

#### ABERDEEN DISTRICT.

**ANGUS** (Eastern). *Wheat*—Another good season for wheat; quality and weight per bushel above average; as usual, a breadth of 'thin land' was sown yielding only about 30 to 32 bushels, but on the good wheat land 56 to 60 bushels was quite common with an average yield of about 52 bushels; straw was of average bulk, was very well secured, and grain all millable; seeding, 3 to 4 bushels per acre. *Barley*—Acreage gradually being reduced; crop of excellent quality and threshed out well—up to 60 bushels on the best land; all over 4 to 6 bushels better than 1934 with more straw which was above an average for bulk; seeding, about 3½ bushels per acre; on the best land malting barley was mostly sown, but on the higher and poorer land common barley was grown for distilling or feeding. *Oats*—Were much more satisfactory than last year and were secured in good order; straw and grain were both up to average for bulk and quality, and colour was very good; 96

bushels was not uncommon on the best land, and even on poor land would thresh 16 bushels more than last year; the average was about 64 bushels; seeding, about 5 bushels of thick-skinned and 4 bushels of "Potato" or "Early Miller" variety. *Harvest*—Was early, beginning first week in August, whereas the average time is usually the last week of August; the weather generally was good, though it broke down in the latter half of September. *Hay*—Crop from ryegrass and clover, which is the usual mixture, was very good and above last year's yield by 10 to 15 cwt. per acre; average yield from 50 to 65 cwt. per acre; secured in excellent condition. *Meadow Hay*—Little grown. *Potatoes*—Crops varied very much according to the nature of the land. On very dry land the shaws went down early in August, due to drought, and the crops were very small, about 4 tons being quite common; on good deep land the rain came in time to save the crop, but in some varieties, "Majestic" especially, the second growth caused the large tubers to split, often to as much as 4 to 5 tons per acre. "Doon Star" was one of the most promising new varieties, and did very well. *Turnips*—Braird came away well and grew fast till checked by July and August drought; yellows resulted in a very poor 'corky' crop; many fields of swedes were as bad, and where the land was more moist the autumn rains greatly improved the weight; there were many 'black-hearted' roots which rotted on the early land; on late upland and colder land the crop was better than usual and very satisfactory; many heavy crops were recorded, so that an average yield cannot be given. *Insects*—Mildew and green-fly in early districts did damage during autumn. *Weeds*—Were easily killed on account of the dry summer and did no harm to green crop; charlock in grain crops was not so bad as usual. This weed much less owing to constant spraying. *Pastures*—Did well all the season; rain came in time to save them, giving a luxuriant autumn growth. *Live Stock*—Did exceedingly well. Cattle and sheep were free from disease. *Clip of Wool*—Of average weight and quality.

KINCARDINESHIRE. *Wheat*—32 to 56 bushels per acre; quality of grain excellent; 4 bushels per acre sown. *Barley*—28 to 44 bushels per acre; quality of grain and straw good; 4 bushels per acre sown. *Oats*—Thin-skinned varieties, 24 to 56 bushels per acre; thick-skinned varieties, 32 to 76 bushels per acre; and in a few exceptional cases a little more; lea oats generally good, but clean land oats varied considerably, especially on very dry and sandy soil; quality excellent, except where damaged by weather in the stook; 6 to 8 bushels per acre sown. "Ceresan" and similar dressings were extensively used with satisfactory results. *Harvest*—Began about the middle of August, practically the same time as last year; weather was rather broken in September, and the harvest in many cases was somewhat protracted. *Hay*—A good crop, up to average, and secured in excellent order; about 50 cwt. per acre. *Meadow Hay*—None grown. *Potatoes*—Great variation in the crops in different districts; yield from 3 to 10 tons per acre; quality generally good with very little signs of disease; no new varieties grown. *Turnips*—On the whole a very good crop, especially early sown swedes; all over, crops were a great improvement over last year. *Insects*—Very little damage to any crops. *Weeds*—Owing to the dry summer were easily kept in check. *Pastures*—Very abun-

dant until the end of July when the very dry weather had a very adverse effect on all grass and aftermath, but in September an improvement resulted after rain. *Live Stock*—Throve very well and were generally free from disease, except that grass sickness was very prevalent amongst horses. *Clip of Wool*—An average clip, of good quality.

**ABERDEENSHIRE (Buchan).** *Wheat*—None grown. *Barley*—Yield 38 bushels per acre. *Oats*—Good crop, 40 bushels per acre. *Harvest*—Commenced about 25th August; crops secured in fair order after a protracted harvest. *Hay*—Extra good crop; well secured; about 3 tons per acre. *Meadow Hay*—None grown. *Potatoes*—Crop not so good as last year; 5 tons per acre; no disease; no new varieties planted. *Turnips*—A splendid crop; no resowing; yellows, 12 tons per acre; swedes, 18 to 20 tons. *Insects*—No injury by insects. *Weeds*—Oats in some cases badly injured by knotgrass. *Pastures*—Average growth and quality. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—Average clip.

**ABERDEENSHIRE (Central).** *Wheat*—40 to 42 bushels per acre; quality of grain and straw much the same as last year, which was fairly good; seed sown, 3 to 3½ bushels per acre, mostly sown with drill machine. *Barley*—40 bushels per acre, 2 bushels more than last year; natural bushel weight 56 lb. per bushel, same as last year; seed sown, 3 to 3½ bushels per acre where sown by drill machine, and 4 bushels per acre where sown by broadcast machine or by hand. *Oats*—50 to 54 bushels per acre, 2 to 4 bushels more than last year; natural bushel weight 43 to 44 lb., about the same as last year; straw, 24 to 25 cwt. per acre, rather more than last year; seed sown—Potato and all thin-husked varieties, 5 bushels per acre; where sown by drill machine, 1 to 1½ bushels extra; where sown by broadcast machine or by hand, all thick-husked varieties 1 to 1½ bushels additional. *Harvest*—Began generally about the 21st of August and was completed 26th to 28th September; much about the same as last year. *Hay*—30 to 34 cwt. per acre, 4 to 6 cwt. more than last year; better quality than last year, both ryegrass and clover. *Meadow Hay*—More productive than last year. *Potatoes*—6 to 7 tons per acre, much about the same as previous year; quality good; disease reported only to a very small extent; no new varieties planted. *Turnips*—11 to 12 tons per acre, in many cases double that of 1934; crop braided well and did well throughout the season; only to a very small extent was second sowing necessary. *Insects*—No injury to any extent. *Weeds*—No injury where land was well cultivated. *Pastures*—During the season were of average growth and quality. *Live Stock*—All stock throve well. Cattle and sheep free from disease. *Clip of Wool*—Much about the same as last year; if anything, a little better.

**ABERDEENSHIRE (Strathbogie).** *Wheat*—None grown. *Barley*—Quantity grown rather below average. Whilst the yield in one or two areas was disappointing—as low as 30 to 36 bushels per acre—the average reached 44 to 46 bushels per acre, mainly weighing 54 to 58 lb. per bushel; seed sown, 3½ to 4 bushels per acre. *Oats*—

Several districts better than last year; yield generally speaking above the average, from 46 to 52 bushels per acre, and in some isolated cases very gratifying results up to 70 to 88 bushels per acre were obtained; weight 42 to 44 lb. to the bushel; straw in some cases of good quality and quantity satisfactory, on the whole about the average. *Harvest*—Crops were well harvested and generally slightly earlier than usual. *Hay*—Grown almost entirely for home consumption; as there was not a sufficient market for hay, the tendency was to grow only enough to satisfy local demand. *Meadow Hay*—None grown. *Potatoes*—Average quantity and of good quality; main variety Kerr's Pink, but Golden Wonder also grown extensively; no new varieties grown except a few earlies. *Turnips*—Good crop generally; no resowing, but a short yield by end of season owing to 'bare frosts.' *Insects*—No trouble by grub or insects. *Weeds*—First half of season only fair for cleaning land, but improved later. *Pastures*—Slow in coming; a May storm did damage; later became very abundant. *Live Stock*—Throve well. A number of cases of grass sickness in horses, but cattle and sheep on the whole were free from disease. *Clip of Wool*—Quantity average and quality good; on the whole the clip was heavier than 1934; some very good Blackface clips. *General Remarks*—There was a tendency to use more hay for feeding, especially to cattle, owing to the poor market. The back end of the season was abnormally wet.

BANFFSHIRE (Lower). *Wheat*—The small acreage grown did fairly well. *Barley*—40 to 48 bushels per acre; seed sown, 4 to 4½ bushels per acre; straw of fine quality; the crop was well harvested and none of it was laid. *Oats*—Similar to last year; 50 to 60 bushels per acre, most of it of good quality; natural weight 42 to 45 lb. per bushel; straw of fine quality; seed sown, 6 bushels per acre. *Harvest*—Was earlier than usual. *Hay*—Fairly good crop, about 40 cwt. per acre; slightly more than last year. *Meadow Hay*—None grown. *Potatoes*—Similar to last year, from 7 to 8 tons per acre; no disease, and no new varieties planted. *Turnips*—Heavier yield than last year; 20 tons and over per acre; crop braided well; no resowing; frost during February destroyed about 10 per cent of the crop. *Insects*—No injury by insects. *Weeds*—No injury by weeds, although thistles were more prevalent than usual. *Pastures*—Did fairly well; rain was badly needed towards latter period of grazing season. *Live Stock*—Throve fairly well. Cattle and sheep free of disease. *Clip of Wool*—Average clip.

BANFFSHIRE (Upper). *Wheat*—None grown. *Barley*—A very restricted area grown as distillers were using the cheaper foreign barley. *Oats*—Also a restricted area grown; yield 4 to 6 qrs. per acre. *Harvest*—Began in August and dragged on to the second week in October. *Hay*—Not much grown, as most of the land given over for sheep pasture. *Meadow Hay*—Very little grown. *Potatoes*—Only planted for home consumption; no disease; chief varieties were Kerr's Pink and Keppleton Kidney. *Turnips*—Did well all through season; no second sowing. *Insects*—Free from insects all season. *Weeds*—None. *Pastures*—A fine grazing season, and all stock thrived well. Cattle and sheep were free from disease. *Clip of Wool*—Good clip and of good quality.

## INVERNESS DISTRICT.

MORAYSHIRE. *Wheat*—22½ cwt. per acre ; straw, 32 cwt. per acre ; quality first-class ; 4 bushels per acre sown. *Barley*—18½ cwt. per acre ; quality good ; weight, 54½ lb. per bushel ; straw, 19 cwt. per acre ; 4 bushels sown. *Oats*—17 cwt. per acre ; quality good ; weight average ; straw, 22½ cwt. per acre. *Harvest*—Began about average date. *Hay*—30 cwt. per acre ; quality good ; crop well secured. *Meadow Hay*—Slightly heavier crop than last year. *Potatoes*—2 tons per acre above last year ; quality first-class ; less appearance of disease ; no new varieties planted. *Turnips*—Heavy crop and above average ; very little resowing. *Insects*—None. *Weeds*—Fields were well cleaned ; damage from weeds not more than usual. *Pastures*—Quality as good as last year and growth similar. *Live Stock*—Throve well. Cattle free from disease, but more disease amongst sheep. A few heavy losses in flocks of lambs on arable fields, probably on account of over-stocking. *Clip of Wool*—An average.

NAIRNSHIRE. *Wheat*—Little grown. *Barley*—Yield 36 bushels ; 4 bushels per acre sown. *Oats*—Yield 52 bushels ; seed, 6 to 7 bushels per acre. *Harvest*—Began about normal time. *Hay*—Slightly over average, about 1½ tons per acre. *Meadow Hay*—None grown. *Potatoes*—A good crop, about 7 tons per acre ; no disease, and no new varieties grown. *Turnips*—A much improved crop compared with last year ; braided well ; no resowing. *Insects*—No injury. *Weeds*—No injury. *Pastures*—Average growth and quality. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—Average.

INVERNESS-SHIRE (Inverness). *Wheat*—Not a large wheat area, but cultivation on the increase ; good crop ; seed, 4 bushels per acre. *Barley*—Good crop ; 40 bushels per acre. *Oats*—A good crop ; 52 bushels per acre. *Harvest*—Began about a week later than last year ; weather good at the beginning, but latterly became very wet with a result that it was very prolonged ; a good deal of damage to grain. *Hay*—An average crop ; 30 cwt. per acre ; quality good. *Meadow Hay*—A good crop, but on account of the very wet weather was difficult to secure. *Potatoes*—Yield in many cases below average ; quality excellent ; no disease. *Turnips*—Very good ; practically no second sowing ; in most cases a heavy crop. *Insects*—No damage. *Weeds*—No damage by weeds. *Pastures*—Quite an average. *Live Stock*—Did very well. Cattle and sheep free from disease. *Clip of Wool*—Average clip ; quality good.

INVERNESS-SHIRE (Skye). *Wheat*—None grown. *Barley*—None grown. *Oats*—Crop was much better than last year, both in bulk and quality. *Harvest*—Began a little earlier than usual, commenced about the 20th August. *Hay*—On the whole, better crops than last year. *Meadow Hay*—Not nearly so heavy a crop as last year ; on the poorer lands very short ; like last season, hay not ripe for cutting until August ; was secured in poor condition on account of the wet weather ; much of it was either lost or not cut. *Potatoes*—Yield was fairly good all over ; on light soil the tubers were sound and of good quality, but on strong soil the quality was bad ; in some parts blight was experienced ; no new varieties planted. *Turnips*—Quite satisfactory. *Insects*—No appreciable damage. *Weeds*—

Generally the damage was less than in previous season. *Pastures*—Growth during the season was not so good as that of last year. *Live Stock*—Throve well on the pastures from the beginning of July onwards. Stock kept pretty sound after the month of May. *Clip of Wool*—Quantity and quality a little better than last year.

ROSS-SHIRE (Dingwall and Munlochy). *Wheat*—More wheat sown than usual; yield 28 to 36 bushels per acre; quality good; seed sown, 3 to 4 bushels per acre. *Barley*—About the same quantity sown as last year; yield 32 to 40 bushels per acre; quality of grain and straw average; seed sown,  $3\frac{1}{2}$  to 4 bushels per acre. *Oats*—Yield 40 to 76 bushels per acre; quality of grain and straw average; seed sown, 5 to 8 bushels per acre. *Harvest*—Began seven to ten days earlier than average, but was very prolonged owing to rain; both grain and straw were very much damaged. *Hay*—1 to 2 tons per acre; quality very good. *Meadow Hay*—None grown. *Potatoes*—Yield 4 to 8 tons per acre; very little disease; quality good. *Turnips*—Crop good; yield: yellows, 8 to 10 tons per acre; swedes, 15 to 20 tons; practically no resowing. *Insects*—No injury by insects. *Weeds*—No injury. *Pastures*—Above average growth. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—Average clip, of good quality.

ROSS-SHIRE (Tain, Cromarty, and Invergordon). *Wheat*—Generally a fair crop on good land; on lighter land much more mixed than last year; considering that wheat is now grown on much lighter land than in past years and that there was less lodging than last year,  $4\frac{1}{2}$  qrs. or 36 bushels was not, on an average, exceeded; seed  $3\frac{1}{2}$  to 4 bushels per acre. *Barley*—Not such a good crop as last year; 46 bushels per acre; on thin land down to 32 bushels per acre; weight  $54\frac{1}{2}$  to 55 lb. per bushel; straw light weight generally, except on good land; quality and colour fair; seed,  $3\frac{1}{2}$  to 4 bushels per acre. *Oats*—On good land a good crop; on light land thin; 5 qrs. average crop; quality of grain only fair but of good colour; straw not so broken as last year. All over an average crop. Seed, 4 to 7 bushels per acre according to variety. *Harvest*—Began generally about 26th August. *Hay*—A good crop, about 36 cwt. per acre; quality, where early cut, good. *Meadow Hay*—None grown. *Potatoes*—A heavy crop in certain districts, Majestics reached 10 tons on many farms; generally a good potato year; little blight as spraying was resorted to extensively. *Turnips*—On the whole a disappointing crop; prospect of extreme scarcity owing to prolonged frost; yellows seem to be getting more difficult to grow, and on account of this more swedes are being sown every year; very little second sowing; yield: swedes averaged about 22 tons per acre; yellows, 18 tons. *Insects*—"Fly" was not so prevalent. *Weeds*—Land was fairly clean. *Pastures*—Good grazing season though aftermath not good. *Live Stock*—Cattle and sheep did well. Cattle free from disease; worm in lambs not so prevalent. *Clip of Wool*—Average.

SUTHERLANDSHIRE. *Wheat*—None grown. *Barley*—A good crop; not so much grown owing to poor prices and the fact that distilleries in the district were not at work. *Oats*—A fair crop, heavy in some districts but light in others; on heavy land a good crop, but poor on light soil. *Harvest*—Commenced generally later than last year and continued for a very long time, due to bad weather in September

and October; lots of farms in the west did not get crop in at all, but the east coast was not so bad. *Hay*—A fair crop, but light; quality good in early districts, but in late districts was secured in bad order. *Meadow Hay*—A very good crop, but secured in very bad condition and in some parts not at all, owing to wet weather. *Potatoes*—A fair crop; not nearly so heavy as last year; quality very good; no signs of disease; a number of new varieties were grown and these did very well. *Turnips*—A fair crop, but late, owing to resowing in many cases; the first sowing, due to dry weather, did not braid. *Insects*—Not so much damage as last year. *Weeds*—Did not do much damage. *Pastures*—Very good on the whole; late to begin with, but improved well during August and September. *Live Stock*—Did much better than last year; a better crop of lambs, although not a record—too many eild ewes; a small death-rate among sheep; cattle did very well. Cattle and sheep free from disease; maggots were not nearly so bad as last year. *Clip of Wool*—A good clip, of much better quality.

**CAITHNESS-SHIRE.** *Wheat*—Not much grown; on one farm the yield was 56 bushels per acre; grain and straw of good quality; seed sown, 4 bushels per acre. *Barley*—Only small quantity grown; crops were of average growth; yield 40 to 44 bushels per acre; seed sown, 4 bushels per acre; quality of grain and straw average. *Oats*—Crop similar to last year, though quality of grain not quite so good; averaged 36 to 40 bushels per acre; straw, 2 tons per acre; seed sown, 4 to 7 bushels per acre. *Harvest*—Began at usual time; cutting was general by the first week of September, though some fields were in stock during the last week of August; weather, however, was unfavourable and retarded cutting; stooks were left a long time in the fields, and sprouting was common. *Hay*—An average crop; not so heavy as last year; clover not so profuse; cocksfoot, timothy, and ryegrass were of average growth; yield generally 2½ tons per acre. *Meadow Hay*—Similar to last year; where cut late was badly damaged by wet weather. *Potatoes*—Crops were good; tubers bigger than last year; average quantity 8 to 10 tons per acre; disease was only evident to a slight extent, noticeable about the third week of August; no new varieties planted. *Turnips*—Better than last year; average yield; swedes, 28 tons per acre; yellows, 20 tons; crop was slow in braiding; no resowing required. *Insects*—Practically no damage to crops by insects; although grub was evident in some fields, the damage was slight. *Weeds*—An abundant growth of weeds, worse than usual; thistles profuse in cereal crops and pastures; spurrey, sorrel, corn-marigold, and knotgrass infested grain and root crops. *Pastures*—Of average growth and quality, similar to last year. *Live Stock*—Throve well on pasture; cattle and sheep made good progress. Though there were several cases of mammitis, cattle on the whole were free from disease; there were several outbreaks of grass sickness in horses, and sheep were subject to attack by the maggot-fly. *Clip of Wool*—An average clip, of good quality.

**ORKNEY.** *Wheat*—None grown. *Bere*—Sowing was completed about the middle of May; seed, 4 bushels per acre; healthy plants and an early crop; harvesting commenced first of September, but it was not secured until late September and in some cases not until

October; straw below normal; yield of grain approximately 35 bushels per acre; weight averaged 48 lb. per bushel. *Oats*—Occasional lots sown early in March, but sowing was not completed until late April or first week of May; cutting was general in mid-September, but the excessive wet delayed the ingathering and November was in before crops were secured; sprouting in stooks was more in evidence than usual; straw below average and of poor quality; good yield of grain, but inferior quality; 34 bushels per acre, weighing 38 to 40 lb. per bushel. *Hay*—Bulk below average, but quality good; mostly secured in yard by first week of August; yield 30 cwt. per acre; rye was short and good clover not so abundant. *Meadow Hay*—Poor crop owing to wet harvest. *Potatoes*—A good yield, above average, but wet season hampered lifting and affected quality; half of the crop remained in ground. *Turnips*—Sowing commenced end of May, a dry down-lay; singling commenced first week of July; July rains made up for dry June and brought roots to hoe; a good average crop, fairly free from disease. *Insects*—None. *Weeds*—None. *Pastures*—Bad weather in May blighted grass, but good crop from mid-June on; foggage had to be left owing to cold wet weather in September when cattle had to be stalled. *Live Stock*—Cattle did well on pasture; lambs were not so numerous and there were some losses owing to bad weather, but all progressed well from June onwards and met a good market. *Clip of Wool*—Average.

**SHETLAND.** *Wheat*—None grown. *Barley*—None grown. *Oats*—In most districts there was a good crop of oats; before harvest, however, considerable lodging took place and the harvest itself was one of the worst on record; in many cases the crop was not secured until November; much grain was lost and the straw was badly damaged; yield: grain, 18 to 20 cwt. per acre; straw, 30 to 38 cwt. per acre. *Harvest*—The harvest was very late in commencing, except in the early district of Dunrossness, and was not general until the third week of September, about three weeks later than usual. *Hay*—Crop was slightly under average in most districts; clover was lacking; was also badly damaged during harvesting, due to bad weather, the coles in cases standing out for over a month. Yield 25 to 30 cwt. per acre. *Meadow Hay*—Was rather less productive than usual. *Potatoes*—About an average, and distinctly better than last year; the only disease reported was blight, and this was fairly prevalent in some districts; no new varieties tested; yield 6 to 8 tons per acre. *Turnips*—In some districts did exceptionally well, while in others the crop was only fair; yield about 20 tons per acre, in good districts 25 to 28 tons per acre; the crop braided well and no resowing required. *Insects*—In nearly all districts there was damage to cabbages by root-fly, and was greater than last year. *Weeds*—Charlock caused some damage to the oat crop; this weed is very prevalent throughout Shetland. *Pastures*—Generally were late in developing and in many places were below average; growth considerably behind last year. *Live Stock*—Generally did well, although at the autumn sales animals were not quite so good as formerly. Cattle and sheep were free from disease. *Clip of Wool*—The quality of the clip was about average. There was a good demand for Shetland wool, and up to about 2s. per lb. was offered for pure Shetland wool (white); moorit and black wool was in less demand.



## THE WEATHER OF SCOTLAND IN 1935.

By M. T. SPENCE, B.Sc., London.

THIS report consists of (1) a general description of the weather from month to month, and (2) a selection of rainfall returns in which each county of Scotland is represented by one or more stations. It is to be noted that all temperature readings referred to are, unless otherwise stated, from the thermometers exposed in the regulation "Stevenson Screen."

### JANUARY.

Comparatively fine, dry, anticyclonic conditions prevailed from the 4th to the 9th, 16th to 22nd, and on the 29th. The remainder of the month was unsettled, with mild weather between the 1st and 3rd and cold weather from the 24th to 28th as well as on the last two days. Gales occurred infrequently, but that of the 24th to 26th was severe and caused structural damage; on the 25th a gust reached 100 miles per hour at Butt of Lewis.

For the ninth consecutive month mean temperature exceeded normal. The first three days were exceptionally mild; on the 2nd, generally the warmest day of the month in Scotland, unusually high maxima for the time of year were recorded—*e.g.*, 58° F. at Arbroath, 57° F. at Perth, Keltins, and Carnoustie. Among the lowest shade minima were 16° F. at Dalwhinnie and 18° F. at Balmoral and Braemar on the 28th. Ground frosts occurred at some place or other on all nights except the 2nd, 3rd, and 11th.

Rainfall was deficient except locally in the west, north, and north-west. Central Scotland had less than half its average, and parts of Perthshire less than a third of their average. The period from the 15th to 21st was particularly dry. Aggregates for the month ranged from less than an inch in East Lothian and Fife to more than 10 inches locally in the north-west—*e.g.*, 13.86 inches at Glenquoich in Invernessshire. Widespread snow fell between the 11th and 13th, between the 25th and 27th, and on the 31st. Most of the country was covered from the 25th to the 28th. Sporadic thunderstorms occurred in west and north Scotland on the 24th and 25th, and in the extreme north on the 31st.

While the south enjoyed sunshine in excess of normal, the

north had a deficiency, but departures from average were nowhere big.

### FEBRUARY.

Apart from the 7th to the 9th, when anticyclonic conditions prevailed, low-pressure systems gave rise to stormy, unsettled, though mainly mild conditions. Gales were frequent, those of the 1st to 2nd and round the 18th to 25th were the most widespread and severe.

Temperature again exceeded normal, which made February the tenth consecutive month with high mean temperature. The first day was exceptionally mild, a maximum temperature of 57° F. at Aberdeen being the highest recorded in early February at that station since 1871. Dundee and Arbroath also experienced 57° F., and Perth and Leuchars 56° F. on the same day. Another unusually mild spell occurred from the 18th to 20th. A brief cold spell between the 24th and 26th gave minima of 10° F. at Dalwhinnie, 12° F. at Balmoral, and 16° F. at West Linton in Peebles; also 28 degrees of frost on the ground at Dalwhinnie, 27 degrees at Balmoral, 25 degrees at Auchincruive, and 24 at Arbroath.

Rainfall exceeded normal, except locally in the extreme north and along the east coast south of Aberdeen. Total falls ranged from about an inch in parts of South-East Scotland to more than 15 inches in places in the West Highlands. On the 18th exceptionally heavy falls occurred locally, 4.13 inches at Ardgour in Argyll, 3.67 inches at Achnacarry, and 3.18 inches at Clunes, both in Inverness-shire. Falls of hail occurred fairly frequently. Snow was widespread on the 2nd and 3rd and round the 24th. From the 24th to the 26th snow lay over the greater part of the country and roads were blocked in places. The south and west experienced thunderstorms on the 20th and 21st; thunder was also reported locally on the 2nd, 14th, 15th, and 16th.

Sunshine differed little from average.

### MARCH.

The first half of the month can be divided into two periods—namely, the first six days when pressure was low to the north-west giving rather unsettled conditions, followed by nine days of anticyclonic weather. For the second half of the month, with the exception of an intervening day or two of anticyclonic conditions, low-pressure systems, passing to the north of Scotland, maintained unsettled, mild weather. Gales were neither frequent nor outstanding in severity, but those of the 25th and 31st affected wide areas.

Mean temperature exceeded normal for the eleventh consecutive month, the excess being almost everywhere between  $2^{\circ}$  F. and  $3^{\circ}$  F. The highest temperature for the month in Scotland was  $63^{\circ}$  F. at Aberdeen on the 25th; another very mild day was the 31st, with maxima of  $61^{\circ}$  F. at a few places. The lowest minima were  $16^{\circ}$  F. at Braemar and  $17^{\circ}$  F. at Balmoral, both on the 12th. Ground frosts occurred frequently: 21 degrees of frost at Dalwhinnie on the 8th and also at Braemar on the 12th are notable.

Except in the extreme north, where totals reached average, the month was dry. In the extreme south aggregates were less than half the average. Totals ranged from less than an inch in the Edinburgh district to some 7 inches locally in the north-west. Hail showers, too, were infrequent. Comparatively little snow fell, the 5th and 15th being the only dates with appreciable falls. On the 15th the northern part of the country was mostly affected, but the snow did not lie.

Due to the frequent foggy conditions in the middle of the month, sunshine was deficient in southern Scotland; north Scotland generally had more sunshine than average.

#### APRIL.

High pressure on the Atlantic and low pressure over the Continent gave cold northerly winds with wintry showers at first. From the 6th to the 23rd, when depressions crossed the country, conditions were variable with some heavy falls of rain, but also with some bright days. Thereafter an anti-cyclone maintained dry and generally fine weather, mild by day but rather cold at night. The month was comparatively quiet, the only widespread gale being that of the 10th-11th. On the 10th gusts of 76 miles per hour were recorded at Renfrew and Bell Rock.

Mean temperature differed little from average. The first seven or eight days were rather cold; subsequently temperature was variable. The highest temperatures occurred towards the end of the month—*e.g.*,  $66^{\circ}$  F. at Ardtornish in Argyll on the 26th,  $65^{\circ}$  F. at Onich in Inverness-shire on the 25th, and  $64^{\circ}$  F. at Stirling and Paisley on the 29th. Among the lowest were  $16^{\circ}$  F. at Balmoral and  $17^{\circ}$  F. at Braemar on the 7th. Ground frosts were very frequent.

Over most of East and South Scotland rainfall exceeded normal considerably, being more than twice the average at many places. The north-west of Scotland had less than average. Though considerable variation was shown in figures expressing rainfall as percentage of average, the month's total falls were unusually uniform, being generally about 3 inches. Thunderstorms occurred practically everywhere

between the 20th and 22nd, the storm of the 21st was severe in western districts. Wintry showers were experienced over the whole country on the first few days of the month, but after the 10th little snow fell. On the 6th snow was  $7\frac{1}{2}$  inches deep at Balmoral.

Sunshine was deficient, the deficiency amounting to an hour a day in the extreme north and also in the extreme south of the country.

#### MAY.

The outstanding feature of the month was the persistence of winds from between north and east associated with high pressure centred mainly to the north. From the 11th to the 19th hail, sleet, or snow showers accompanied the northerly winds. Generally the winds were not strong, except between the 15th and 17th.

For the first time since April 1934 mean temperature over Scotland as a whole fell to a level considerably below normal. The week ending 18th May was the coldest for the time of year since at least 1865. Towards the end of the month relatively high maxima were experienced in the west but not in the east—*e.g.*, 74° F. at Kilmarnock and 72° F. at Colmonell in Ayrshire on the 28th. Some notably low minima were recorded, 21° F. at Dalwhinnie on the 13th and 17th, 22° F. at Wolfelee in Roxburghshire on the 15th, 24° F. at Balmoral and West Linton on the 15th, and 24° F. at Auchincruive in Ayrshire on the 18th. Ground frosts were very frequent.

Except during the period from the 12th to the 19th, precipitation was scanty and aggregates fell short of normal. In parts of Perthshire, with the exception of 1876, and in parts of Inverness-shire, with the exception of 1928, no drier May has been recorded. Heavy individual falls rarely occurred, but exceptionally on the 17th 1.33 inches fell at Peterhead. Snow fell everywhere between the 13th and 17th, being particularly heavy in north-east districts. By the 17th most of the country was covered.

Good sunshine records were enjoyed in the west. At Eskdalemuir in Dumfriesshire no month of any name has been more sunny since records began in 1909. In contrast, the Shetland Islands had a poor sunshine record, while at Aberdeen it was a little less than normal.

#### JUNE.

For the first week a complex low-pressure system gave dull, unsettled, and thundery conditions. During the next two weeks Atlantic depressions maintained rainy weather.

Subsequently, with high pressure to the east and south, many days were warm, close, and thundery. Winds were comparatively light.

Mean temperature exceeded normal, and some very high maxima occurred towards the end of the month, notably 84° F. at Dunbar and Kelso and 83° F. at Marchmont and Ruthwell on the 22nd. Among the lowest minima were 30° F. at Eskdalemuir on the 9th, 31° F. at Kelso on the 2nd, and 32° F. at Wick and West Linton on the 9th.

Rainfall, mainly of thunderstorm type, was both heavy and frequent except in the extreme north and north-east. On the 24th, phenomenal rainfall occurred over most of Central Scotland and parts of West Scotland; more than 4 inches fell locally in Perthshire; flooded streams caused damage to bridges and roads at Aberfeldy and Crieff. The 4th and 5th were also days of heavy thunderstorm rain locally. In contrast, total rainfall for the month at Wick was rather less than an inch. Hail showers were widespread on the 7th, 13th, and 16th.

Sunshine records showed a deficiency except at Stornoway. The deficiency amounted to more than two hours a day at Perth, Ruthwell, and Stirling.

## JULY.

From the 6th to the 16th high pressure gave warm, dry, and sunny weather. For the rest of the month unsettled conditions prevailed, especially in northern districts. Winds were comparatively light on the whole.

During the first week, and again between the 17th and 21st, temperatures remained below average, but for the rest of the month warm weather prevailed. At times it was very warm, notably so on the 13th when 83° F. was reached at Forres, Dundee, and Kirkcaldy, and 82° F. at Gordon Castle, Perth, Edinburgh, and Dunbar.

The month was wet in the extreme north and dry in the south. In parts of Central and Eastern Scotland aggregates amounted only to a quarter of average. Perhaps the most interesting feature was the heavy rainfall in the Shetland Islands on the 20th, when 4·28 inches fell at Baltasound and 3·37 inches at Lerwick. In Edinburgh (total rainfall 0·62 inches) no drier July has been experienced since 1913, and at Baltasound (total 7·55 inches) no wetter July since records commenced. A shower of sleet fell at Kirkwall at mid-day on the 18th.

Sunshine well in excess of average was enjoyed almost everywhere, and at several places—*e.g.*, Eskdalemuir, Inchkeith, and Edinburgh—no sunnier July is on record.

## AUGUST.

In the early part of this month a high-pressure system extended northwards and covered most of Scotland, giving fine weather. In the middle of the month secondary disturbances adversely affected the weather on several days. Towards the end of the month depressions over the British Isles caused heavy falls of rain in places. Gales were reported locally at the end of the month; otherwise winds were light.

Mean temperature exceeded average by some 2 degrees. For the first seven days very warm conditions prevailed. Another very warm spell occurred between the 20th and 24th when maxima were highest for the month—*e.g.*, 84° F. at Gordon Castle, 82° F. at Ruthwell, and 81° F. at Nairn. Ground frosts were recorded locally on the 12th, 13th, 23rd, and 28th.

Generally, West (but not South-west) and North Scotland had rainfall aggregates exceeding normal, and the rest of Scotland less than normal. Over most of the country the end of the month saw the heaviest individual falls, measurements of half an inch or more being common. Thunderstorms were neither frequent nor severe.

Eastern counties enjoyed more sunshine than usual, but a deficiency occurred in the west and north. Stornoway's 83 hours was the poorest August total on record there.

## SEPTEMBER.

Depressions crossing the British Isles gave rise to almost continuously unsettled weather, the only intervening period of finer conditions being from the 6th to the 9th. During the latter half of the month depressions were intense. Gales and strong wind occurred frequently. The gale of the 19th caused damage on land and sea: a gust of 82 miles per hour was recorded by the anemograph at Bell Rock.

Mean temperature differed little from average, and there were no very remarkable extremes, the highest temperature in Scotland being 70° F. at Ruthwell in Dumfriesshire. The warmest part of the month occurred between the 11th and 13th, and the coolest—a brief two or three days' duration—round the 25th. Ground frosts were confined to the nights between the 6th and 10th, and 24th to 27th.

A notable feature was the wetness of the month. Rainfall greatly exceeded average except locally in Aberdeenshire and in South-east Scotland where aggregates approximated to normal. Totals amounted to more than twice the average in parts of West Scotland and locally in Perthshire. A total of no less than 14.85 inches was recorded at Inveraray. Some

heavy individual falls were also recorded—*e.g.*, 2.54 inches at Achfary in Sutherlandshire on the 3rd and 2.53 inches at Kinlochquoich in Inverness-shire on the 19th. Hail showers were not frequent. Thunderstorms on the 2nd, 13th, and 15th were experienced over most of South Scotland and locally elsewhere.

Sunshine did not differ much from average, except at Stirling where the deficiency amounted to 39 hours for the month.

### OCTOBER.

A succession of depressions from the Atlantic either crossed the British Isles or passed in their near vicinity, giving very unsettled weather; the disturbance of the 19th was exceptionally intense, barometer readings in the north of Scotland being as low as 28.12 inches. High winds and gales occurred frequently; the gale of the 18th-19th caused considerable damage, and a gust of 101 miles per hour was experienced at Bell Rock.

Mean temperature, though slightly below average at most places, departed little from normal anywhere. The mildest spell came between the 13th and 16th, when maxima round 60° F. were common and night temperatures were unusually high for the time of year. The nights of the 20th-21st and 21st-22nd were everywhere the coldest; minima of 20° F. at Kilmarnock, 24° F. at Dalwhinnie, and 25° F. at places in South Scotland were recorded.

Rainfall was phenomenal; aggregates exceeded twice the normal over most of the country and three times the normal at Inverness, Inveraray, and Glasgow. Only in the county of Aberdeen did falls approximate to average. At Inveraray, where 22.92 inches fell, and where records go back to 1881, there has been no wetter month of any name. At Glasgow and Greenock, where records go back to 1866, totals were exceeded once in October—namely, in 1874. In Edinburgh no wetter October has been experienced since 1907. The frequency of occurrence of rain was also phenomenal. In parts of the counties of Argyll, Dumbarton, and Kirkcudbright, also in Skye and the Outer Hebrides, no day failed to have measurable rainfall. Among the heaviest individual falls were 3.89 inches at Glenquoich in Inverness-shire and 2.90 inches at Glenshiel in Ross-shire on the 18th. Sleet or snow fell over the whole country between the 20th and 22nd; the Grampians were covered, but not to any great depth.

The month was also one of the most sunless of Octobers. At Stirling, Inchkeith, Renfrew, and Eskdalemuir no October has been duller since records began in 1918, 1923, 1921, and 1910, respectively. At Paisley, where records go back to 1885, only one duller October (1920) has been experienced.

## NOVEMBER.

Until the 20th the weather was dominated by complex low-pressure systems, which travelled slowly and irregularly with their central areas more often than not to the south of Scotland. In consequence, easterly winds were frequent and rain fell heavily at times. Between the 21st and 24th more settled anticyclonic conditions prevailed. For the rest of the month low-pressure systems moved eastwards from the Atlantic and weather was again unsettled. Winds were light for the time of year except on the last six days.

Generally mean temperature slightly exceeded average. On the first few days temperatures were very high for the time of year—*e.g.*, 61° F. at Turnberry and 60° F. at Colmonell and Fort William on the 3rd. The lowest temperatures of the month, except locally in the west and north, occurred on the night of the 23rd-24th. Among the extremes were 21° F. at Wolfelee in Roxburgh and 22° F. at West Linton and Peebles.

Rainfall exceeded normal over East and South Scotland, but was deficient in the north-west. Locally in Fifeshire and Dumfriesshire totals approximated to twice the normal. The actual falls were, however, remarkably uniform, ranging for the most part from 3 to 5 inches. On the 17th falls of more than an inch were widespread in North and East Scotland; 1.55 inches at Dundee, 1.52 inches at Edinburgh, and 1.48 inches at St Andrews. In West Scotland the last few days were the wettest—*e.g.*, 1.85 inches at Inveraray on the 29th and 1.64 inches at Carsphairn in Kirkcudbright on the 31st. Snowfall did not become appreciable until the 30th, when for the first time of the season most of the country was snow covered.

During the quiet weather between the 5th and 24th fogs developed frequently at night and in the early morning.

The north of Scotland enjoyed sunshine in excess of normal, but generally the south experienced a deficiency, more especially in the towns owing to the frequent foggy weather. Stirling had 31 hours and Perth 22 hours less than average.

## DECEMBER.

With the exception of the few days between the 10th and 13th, when barometer readings reached high levels, the country was under the influence of low-pressure systems. During the greater part of the month, however, winds were relatively light. Gale force was reached at times in south-western districts between the 1st and 3rd; otherwise gales were confined to the north of the country, being experienced there in the middle and near the end of the month.



It was the coldest December since 1927. At several stations in the west mean temperatures were 5 degrees or more below average. The general course of events was that the month opened with fairly mild conditions, but from the 15th to the 24th a very wintry type of weather persisted; this was followed in turn by mild conditions persisting to the end of the month. During the cold spell some very low temperatures were recorded. The mornings of the 23rd and 24th were outstanding in this respect, minima of 4° F. and 7° F. being recorded at Braemar and Balmoral respectively, and 8° F. at West Linton and Peebles. At Renfrew, during the day of the 23rd, the temperature never rose above 18° F.

Over Scotland as a whole, rainfall aggregates for December were decidedly below average and at some places fell short of an inch. The month was also comparatively free from heavy individual falls, though exceptionally on the 14th measurements exceeded an inch in parts of West Scotland. Snow or sleet fell on many days, especially in the early part of the month and between the 14th and 25th.

Sunshine exceeded normal over almost the entire country, the excess being very pronounced in western districts. At Oban no sunnier December has been experienced since records began in 1911.

#### GENERAL NOTES.

Perhaps the most notable features of the weather of the year 1935 were (1) the low temperatures and snow in the middle of May; (2) the low temperatures in December; (3) gale of 18th-19th October; (4) the abundance of sunshine in South and West Scotland in May and December; and (5) the heavy rainfall in September and October.

# RAINFALL RECORDS FOR 1935, IN INCHES.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>Shetland—Lerwick</b>	3.48	4.10	3.65	2.00	.94	1.78	5.76	3.57	3.69	6.85	2.90	5.05	43.17
<b>Orkney—Kirkwall</b>	4.51	3.82	3.20	2.76	.71	1.89	3.01	4.15	4.76	7.14	5.19	4.35	44.79
<b>Sutherland—Tongue</b>	3.68	3.28	3.29	2.55	1.61	2.95	2.10	4.81	6.40	6.70	2.42	4.17	43.66
<b>Laing</b>	5.11	5.71	2.47	2.19	2.20	2.94	1.75	2.90	4.58	6.26	3.49	3.97	43.57
<b>Ross and Cromarty—</b>													
Fortrose	1.84	2.07	1.41	2.39	1.00	3.09	1.10	3.21	3.05	4.31	2.19	1.57	27.38
Ardross Castle	2.11	4.12	2.30	4.17	2.43	4.80	1.12	3.14	4.26	3.23	3.07	2.74	42.55
Lochcarron	10.50	9.26	6.92	2.62	1.96	3.08	5.89	5.57	11.41	13.52	5.27	4.84	78.91
Stornoway	5.03	4.68	3.77	2.31	1.66	2.66	2.44	3.68	6.76	7.53	3.32	2.77	46.45
<b>Inverness—</b>													
Inverness	1.89	3.61	1.35	2.29	1.15	3.37	1.55	4.55	3.96	7.63	2.69	1.63	35.67
Fort-William	7.87	14.10	6.30	3.16	.93	6.18	3.93	6.96	11.66	15.22	7.30	4.60	87.21
Glenquoich	13.36	18.06	5.74	4.26	1.86	5.93	6.57	7.16	15.58	23.50	7.89	5.78	116.19
Portree	7.61	8.20	4.25	3.66	1.72	3.59	3.90	6.03	9.71	11.54	6.82	4.61	71.64
Nairn—Nairn	1.28	2.20	1.37	2.33	1.51	2.78	1.29	2.98	3.56	4.73	2.63	1.63	23.34
Moray—Gordon Castle	2.12	2.17	2.00	3.03	1.51	1.54	2.35	3.02	3.71	3.49	2.47	2.61	30.02
Grantown	2.02	1.83	1.58	2.93	2.25	2.70	1.36	2.32	4.48	5.64	2.28	1.82	31.96
Banff—Banff	2.18	2.18	1.86	2.33	1.64	1.89	1.80	2.84	4.55	3.42	3.05	3.07	31.92
Aberdeen—Fyvie Castle	2.30	3.06	1.40	3.85	2.54	2.21	2.54	1.94	5.07	4.08	4.44	4.17	37.64
Peterhead	1.79	1.54	1.58	3.25	2.24	2.33	2.24	2.31	5.23	3.21	3.61	4.44	34.84
Aberdeen (King's Coll.)	1.72	1.78	2.06	4.15	1.60	4.23	2.91	2.53	4.24	3.13	4.26	3.19	36.77
Balmoral	2.23	2.31	1.05	5.14	1.41	3.01	.68	2.14	3.64	5.59	4.29	1.66	34.77
<b>Kincardine—</b>													
Balmakewan	1.06	2.14	2.03	4.36	1.29	3.11	1.65	2.23	4.54	4.52	5.56	3.12	35.71
<b>Angus—</b>													
Montrose (Asylum)	1.17	1.98	1.94	3.94	1.12	4.05	1.65	1.82	4.12	3.58	4.53	2.41	32.11
Dundee	1.00	1.65	1.44	3.25	.75	3.61	1.54	2.29	3.87	3.82	4.01	2.06	29.11
Glamis Castle	1.17	2.39	1.70	4.34	.78	3.27	1.40	1.20	4.45	5.36	5.01	2.44	33.51
Brechin	1.31	2.15	1.87	4.81	1.03	4.05	1.41	1.90	4.15	4.65	5.34	2.70	35.37
<b>Perth—Blair Castle</b>	1.54	4.18	2.14	2.88	.60	5.98	.67	2.30	4.00	5.03	3.33	1.56	36.31
Orfoll	1.13	3.48	1.62	3.38	.26	6.35	.89	2.31	4.92	6.18	4.79	2.92	39.66
Perth	.92	1.90	1.16	3.40	.44	2.71	.74	2.22	4.49	4.99	4.66	3.25	29.55
<b>Fife—Cupar</b>	.91	1.63	1.80	2.79	.66	3.33	.98	2.69	3.24	4.86	4.91	2.00	28.77
Kirkcaldy	.87	1.63	1.07	3.04	.60	2.85	.93	2.37	4.02	4.51	4.25	1.86	28.06
<b>Kinross—Loch Leven</b>	.80	2.85	1.11	3.71	.65	2.91	1.52	3.55	5.50	7.24	4.32	2.28	36.44
<b>Clackmannan—</b>													
Tillicoultry	1.11	2.48	1.62	3.03	.53	3.27	1.40	3.12	5.10	7.54	4.05	2.29	35.51
<b>Argyll—Gruline (Mull)</b>	7.55	7.79	4.52	1.34	.80	4.22	4.15	6.51	10.93	13.93	8.04	5.46	79.04
Oban	3.26	5.49	3.09	2.59	.46	3.32	2.94	4.02	9.96	10.11	3.00	4.94	53.11
Glencoe Gardens	6.02	13.51	5.67	3.80	1.01	6.55	3.56	6.13	14.01	16.13	7.23	4.72	88.69
Inveraray	6.52	12.60	4.87	3.77	1.19	6.35	3.87	6.73	14.85	22.92	10.11	6.60	100.55
Campbeltown	3.08	6.75	2.55	5.04	1.34	4.20	2.37	2.16	5.94	10.74	7.56	5.73	57.36
<b>Dumfries—Rothsay</b>	3.50	6.28	2.20	3.43	1.11	3.96	2.73	2.22	6.73	11.38	5.75	4.04	53.81
<b>Stirling—Stirling</b>	1.24	3.47	1.21	3.43	.19	3.33	.58	2.12	3.81	8.30	3.47	2.78	36.53
<b>Dumbarton—Arrochar</b>	6.44	13.00	4.23	5.72	1.20	6.32	3.23	5.12	13.40	18.30	9.29	6.47	93.23
Helensburgh	3.06	7.43	3.28	4.10	.70	3.61	2.47	3.61	7.89	12.32	4.33	4.86	57.71
<b>Renfrew—Greenock</b>	3.25	3.58	2.12	3.34	.57	3.42	2.29	2.94	3.73	12.73	5.33	4.37	53.77
Falsley	1.31	4.52	1.33	3.37	.60	4.47	1.56	1.59	6.70	8.88	4.33	3.20	43.11
<b>Ayr—Kilmarnock</b>	2.71	4.37	2.66	2.93	.64	3.95	2.04	1.90	6.17	8.13	4.50	2.97	43.47
Ayr	.82	3.70	1.39	2.55	.81	2.56	.63	1.45	4.26	5.72	2.91	2.23	28.51
Muirkirk	3.02	6.37	3.35	3.03	.63	4.24	2.32	1.73	5.76	8.37	6.15	3.10	47.61
Pinnore	3.49	5.59	1.85	2.92	1.08	3.49	2.19	1.71	4.40	9.73	6.16	3.41	46.35
<b>Leamington—</b>													
Glasgow (University)	1.52	3.30	1.85	2.77	.43	4.91	1.73	1.85	4.65	7.98	3.91	2.57	37.91
Lesmahagow	1.33	5.03	1.62	3.17	.84	3.89	1.47	1.44	5.47	8.00	3.93	1.91	40.60
Biggar	2.00	4.33	1.33	3.11	.95	2.80	1.07	1.72	4.35	6.20	4.58	1.77	34.77
<b>Linlithgow—</b>													
Uphall (Houston House)	1.41	2.72	1.23	2.75	.31	2.11	1.14	1.52	4.47	7.03	4.32	1.52	31.53
<b>Midlothian—</b>													
Edinburgh (University)	1.26	1.60	.87	3.00	.99	2.12	.58	1.97	3.36	6.39	3.77	1.13	27.17
Gorebridge	1.37	2.38	1.00	2.63	.58	2.58	.77	3.30	6.72	3.83	1.80	2.91	29.16
Oxenford Castle	1.11	1.73	.56	3.17	1.03	2.93	.97	2.65	2.66	6.44	3.44	1.10	27.79
<b>Haddington—</b>													
North Berwick	.79	1.02	1.22	3.05	.93	2.32	.97	3.02	1.90	3.69	2.63	1.51	23.10
Stobshiels Reservoir	1.23	2.13	1.40	2.46	.93	2.44	1.12	2.92	2.25	7.43	3.64	3.03	31.49
Berwick—Duns Castle	1.67	1.63	1.94	2.87	1.01	3.25	1.17	3.44	2.92	4.27	3.80	1.64	29.31
Marchmont	1.81	1.33	1.51	3.22	1.03	4.11	1.27	3.16	2.61	4.33	3.75	1.80	30.55
<b>Peebles—West Linton</b>	2.64	4.50	1.56	3.44	.99	3.12	1.56	1.66	4.33	3.25	5.12	1.60	39.37
<b>Selkirk—Whitmuir Hall</b>	1.41	3.05	1.20	2.85	1.03	3.36	1.21	2.79	4.31	6.48	4.00	1.50	33.20
<b>Roxburgh—</b>													
Kelso (Broomlands)	1.35	1.47	1.24	3.19	.92	3.37	1.01	2.69	2.16	3.75	3.13	1.09	25.92
Wolfelee	2.27	3.22	1.16	3.02	1.06	4.01	1.47	3.35	3.73	6.02	4.03	1.92	35.31
<b>Dumfries—Dumfries</b>	1.41	4.13	1.04	3.62	.74	4.45	1.25	3.15	4.13	6.75	3.29	2.63	39.69
Moniaive	3.03	7.43	2.05	4.04	.63	5.55	1.75	2.38	5.70	8.89	7.46	4.53	53.16
Langholm	3.09	6.32	1.96	5.22	.91	6.12	3.45	5.21	6.80	8.62	6.30	2.61	57.21
Rosedalemuir	3.24	7.69	2.57	5.30	1.16	5.36	2.47	5.04	7.56	10.13	6.13	2.78	59.92
<b>Kirkcudbright—</b>													
Dalbeattie (Drumstain-chall)	1.61	4.21	1.33	4.15	.85	7.20	2.17	3.13	6.21	3.29	7.33	2.36	49.53
Carsphairn (Shiel)	4.55	11.57	2.44	6.94	1.33	7.14	3.91	2.97	9.59	14.42	9.59	6.75	79.86
Auchencarm	1.12	5.17	1.39	3.76	.72	4.26	2.49	3.05	6.70	7.39	7.03	4.16	47.73
<b>Wigtown—Monreith</b>	1.75	3.33	1.23	3.06	.53	3.13	1.77	1.66	5.16	6.64	5.97	5.01	39.71

AGRICULTURAL STATISTICS.—RETURNED UPON 4TH JUNE 1934—(Compiled from Government Returns).

TABLE No. 1.—ACRAGE UNDER CROPS AND GRASS IN EACH COUNTY OF SCOTLAND.

[illegible]

TABLE No. 2.—TOTAL PRODUCE OF WHEAT AND BARLEY, AVERAGE AND YIELD per Acre in the Year 1934, compared with the YIELD for the Year 1933, and the AVERAGE of the Ten Years, in each COUNTY of SCOTLAND.

COUNTIES.	WHEAT.										BARLEY, INCLUDING BEER.											
	Total Produce in 1934.					Yield per acre.					Total Produce in 1934.					Yield per acre.						
																					Average of the Ten Years 1924-1933.	
	Qrs.	Tons.	Acrea.	Bush.	Cwt.	1934.	1933.	Bush.	Cwt.	Qrs.	Tons.	Acrea.	Bush.	Cwt.	1934.	1933.	Average of the Ten Years 1924-1933.	Bush.	Cwt.			
Aberdeen . . . . .	670	150	154	34.9	12.4	34.9	36.8	31.7	36.8	12.4	55,000	11,000	330	35.9	17.8	34.3	37.2	33.4	33.4	17.2	33.4	
Angus . . . . .	90,000	20,000	18,005	88.5	31.6	41.1	41.1	30.6	41.1	31.6	88,000	7,800	33	82.9	18.0	37.1	18.1	87.9	18.1	87.9	18.1	
Argyll . . . . .	80	16	14	46.1	23.3	34.9	34.9	17.2	34.9	23.3	2,800	700	8	83.0	16.5	32.0	16.4	82.7	16.4	82.7	16.4	
Ayr . . . . .	12,000	2,600	1,954	47.0	25.6	46.0	46.0	25.0	45.8	25.6	12,000	2,600	75	90	84.1	16.7	32.8	16.8	32.8	16.8		
Banff . . . . .	300	65	66	36.7	20.0	39.5	39.5	22.2	38.8	20.0	32,000	6,200	30.1	6,238	18.9	33.7	17.0	33.8	17.0	33.8	17.0	
Berwick . . . . .	27,000	6,000	5,248	41.3	22.9	42.5	42.5	23.6	38.8	22.9	50,000	10,000	40.0	9,860	19.7	43.0	20.3	35.9	19.7	35.9	19.7	
Bute . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Caithness . . . . .	70	14	11	50.0	26.8	52.0	52.0	23.1	38.4	26.8	1,300	330	405	85.4	18.3	34.8	15.8	86.6	15.8	86.6	15.8	
Clackmannan . . . . .	2,300	500	415	44.8	24.4	48.1	48.1	26.1	42.6	24.4	1,170	33	29	48.5	22.4	43.5	21.9	41.9	21.9	41.9	21.9	
Dumfriess . . . . .	2,000	440	349	46.1	25.4	48.0	48.0	26.9	41.0	25.4	1,400	250	307	55.9	16.6	38.0	17.0	37.0	17.0	37.0	17.0	
Dumfries . . . . .	3,800	760	731	39.0	20.0	40.8	40.8	21.8	39.2	20.0	40	8	13,000	2,600	36.0	17.0	33.8	13.8	33.8	13.8	33.8	13.8
Dunbarton . . . . .	48,000	11,000	8,753	44.2	24.0	43.3	43.3	27.0	44.3	24.0	68,000	13,000	9	11,670	46.8	23.1	49.7	24.4	46.8	24.4	46.8	24.4
East Lothian . . . . .	91,000	20,000	18,647	89.2	31.1	42.6	42.6	23.7	36.0	31.1	89,000	8,100	30.7	8,881	38.1	13.2	42.3	20.6	38.1	20.6	38.1	20.6
Fife . . . . .	1,800	270	256	39.3	21.3	39.0	39.0	22.1	*38.0	21.3	11,000	2,000	5,081	33.1	13.2	38.1	13.2	27.6	13.2	27.6	13.2	
Inverness . . . . .	15,000	3,000	8,094	41.9	23.0	40.0	40.0	22.5	37.2	23.0	19,000	3,700	4,560	33.7	16.2	35.1	17.5	35.3	17.5	35.3	17.5	
Kincardine . . . . .	16,000	3,200	8,686	40.2	21.9	44.3	44.3	24.3	38.9	21.9	620	120	130	41.0	19.3	39.9	18.9	36.2	18.9	36.2	18.9	
Kirkcubright . . . . .	370	80	81	37.6	20.8	34.3	34.3	18.9	37.2	20.8	65	18	14	36.9	18.0	32.4	16.2	35.0	16.2	35.0	16.2	
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3	33.0	16.3
Levenmouth . . . . .	1,700	320	816	37.9	20.1	38.8	38.8	21.0	36.0	20.1	850	160	18	85	33.0	15.8	35.4	16.3	33.0	16.3</		

TABLE NO. 3.—TOTAL PRODUCE OF OATS, ACREAGE and YIELD per Acre in the Year 1934, compared with the YIELD for the Year 1933, and the AVERAGE of the Ten Years, 1924-1933, in each COUNTY OF SCOTLAND.

COUNTIES.	OATS.							
	Total Produce in 1934.		Acreage in 1934.	Yield per acre.				Average of the Ten Years 1924-1933
				1934.		1933.		
Qrs.	Tons.	Acrea.	Bush.	Cwt.	Bush.	Cwt.	Bush.	
Aberdeen . . .	980,000	141,000	173,631	42.9	16.3	42.1	16.1	39.1
Angus . . .	294,000	43,000	51,844	45.7	16.5	50.5	19.8	50.0
Argyll . . .	72,000	11,000	13,358	48.0	15.7	35.5	12.0	37.6
Ayr . . .	199,000	29,000	31,791	50.0	18.2	49.5	17.9	47.7
Banff . . .	242,000	37,000	42,371	45.8	17.5	37.6	14.6	43.3
Berwick . . .	108,000	16,000	23,011	39.4	14.8	43.3	16.3	39.5
Bute . . .	21,000	2,300	4,007	41.5	14.2	38.4	12.3	41.7
Caithness . . .	121,000	17,000	25,018	38.6	13.9	36.5	13.3	36.6
Clackmannan . . .	15,000	2,200	2,472	49.2	18.2	58.2	21.1	50.1
Dumfries . . .	172,000	25,000	31,510	43.6	16.1	45.6	17.3	41.3
Dunbarton . . .	29,000	4,100	5,885	42.8	15.8	42.6	15.8	42.4
East Lothian . . .	82,000	12,000	11,574	56.9	21.2	59.1	22.1	56.7
Fife . . .	184,000	27,000	34,861	42.1	15.6	51.5	20.0	48.6
Inverness . . .	114,000	16,000	27,598	35.1	11.5	32.9	11.6	30.1
Kincardine . . .	158,000	24,000	29,640	42.7	16.0	45.4	17.3	47.1
Kinross . . .	31,000	4,500	5,712	43.1	15.7	46.7	16.8	44.2
Kirkcudbright . . .	82,000	12,000	16,610	35.4	12.5	35.0	12.0	36.1
Lanark . . .	155,000	23,000	31,852	39.6	14.3	40.1	14.7	41.1
Mid-Lothian . . .	110,000	16,000	16,298	52.3	20.0	57.9	21.5	52.2
Moray . . .	121,000	18,000	21,559	45.0	17.0	46.5	18.2	43.1
Nairn . . .	28,000	4,300	5,962	38.5	14.3	39.1	14.3	36.8
Orkney . . .	145,000	20,000	29,515	39.0	13.6	39.0	13.8	38.6
Peebles . . .	29,000	4,800	5,060	45.5	17.0	46.8	17.1	41.7
Perth . . .	304,000	45,000	55,828	43.6	16.0	46.6	17.3	45.8
Renfrew . . .	58,000	5,600	7,165	42.9	15.8	40.9	14.2	39.9
Ross and Cromarty . . .	143,000	21,000	30,162	38.0	14.1	39.2	14.6	40.2
Roxburgh . . .	97,000	14,000	20,383	37.9	14.0	40.1	14.4	41.2
Selkirk . . .	14,000	2,000	3,295	33.4	11.9	35.7	12.4	35.0
Stirling . . .	79,000	12,000	14,247	44.6	16.7	43.9	16.5	43.2
Sutherland . . .	27,000	3,900	6,216	35.1	12.5	34.5	12.3	36.1
West Lothian . . .	57,000	8,400	8,747	51.9	19.2	54.6	20.4	53.5
Wigtown . . .	191,000	10,000	23,272	42.7	16.0	47.1	15.4	42.3
Zetland . . .	31,000	4,400	5,761	42.5	15.4	25.8	9.1	28.0
Total all Scotland	4,360,000	644,500	810,495	42.7	15.8	43.4	16.2	42.5



TABLE No. 5.—TOTAL PRODUCE OF TURNIPS, SWEDES, and MANGOLDS, ACREAGE and YIELD per Acre in the Year 1834, compared with the YIELD for the Years 1833 and 1832, and the AVERAGE of the Ten Years, 1824-1833, in each COUNTY OF SCOTLAND.

COUNTIES.	TURNIPS AND SWEDES.					MANGOLDS.							
	Total Produce in 1831.	Acreage in 1834.	Yield per Acre.			Average of the Ten Years, 1821-1833.	Total Produce in 1834.	Acreage in 1834.	Yield per Acre.			Average of the Ten Years, 1824-1833.	
			1834.	1833.	1832.				1834.	1833.	1832.		
													Tons.
Aberdeen . . . . .	714,000	75,946	9.4	11.8	12.9	Tons.	210	17	17.9	12.1	17.9	Tons.	12.88
Angus . . . . .	409,000	20,919	15.2	16.1	12.9	14.8	490	22	22.2	17.9	11.0	11.0	10.0
Argyll . . . . .	86,000	4,200	20.0	16.9	16.6	17.3	110	5	22.4	22.2	12.3	12.3	12.3
Ayr . . . . .	123,000	6,583	18.6	18.7	20.8	19.4	6,800	230	22.9	22.9	21.5	21.5	21.5
Barr . . . . .	247,000	17,069	14.0	13.6	15.6	16.7	5	1	10.0	10.0	23.6	23.6	18.0
Bervick . . . . .	284,000	16,718	16.3	14.9	20.2	17.7	4,400	220	20.0	20.0	18.2	18.2	18.0
Bute . . . . .	25,000	1,167	21.8	18.6	17.2	15.6	76	8	25.0	25.0	16.4*	16.4*	16.4*
Galloway . . . . .	210,000	9,618	22.0	18.7	19.3	18.8	..	..	..	..	..	..	..
Glenannan . . . . .	8,500	702	12.1	11.2	12.8	13.6	..	..	..	..	..	..	..
Dumfries . . . . .	196,000	13,885	13.1	16.3	18.4	18.2	3,100	172	17.8	17.8	20.0	20.0	16.9
Dumfries . . . . .	12,000	1,221	12.6	18.4	20.0	17.7	100	10	19.5	19.5	23.9	23.9	20.2
East Lothian . . . . .	108,000	10,248	10.5	14.4	18.5	19.5	9,800	483	22.5	22.5	24.3	24.3	21.8
Fife . . . . .	210,000	17,646	12.0	9.6	13.1	12.3	840	43	20.0	20.0	17.1	17.1	17.9
Inverness . . . . .	86,000	8,097	10.6	10.8	13.1	16.8	..	..	..	..	18.7	18.7	17.9
Kincardine . . . . .	204,000	14,163	14.4	16.6	15.2	19.1	..	..	..	..	..	..	..
Kinross . . . . .	27,000	2,190	12.5	14.5	14.6	14.4	10	1	10.0	10.0	94.0	94.0	16.1
Kirkcubright . . . . .	106,000	8,841	12.7	10.9	15.3	14.0	900	64	18.9	18.9	14.8	14.8	10.2
Leven . . . . .	125,000	8,750	14.8	17.9	10.1	10.2	580	91	18.1	18.1	27.0	27.0	18.8
Mid-Lothian . . . . .	92,000	7,996	11.7	16.9	18.3	18.5	1,500	66	28.6	28.6	23.9	23.9	21.2
Moray . . . . .	186,000	11,848	15.7	16.2	22.4	17.2	840	19	18.4	18.4	30.5	30.5	18.5
Moray . . . . .	84,000	8,486	9.9	10.5	12.8	12.6	..	..	..	..	..	..	..
Orkney . . . . .	139,000	12,095	11.6	10.9	11.5	11.7	..	..	..	..	..	..	..
Perth . . . . .	27,000	2,435	11.0	17.1	18.0	18.7	80	4	20.0	20.0	..	..	..
Perth . . . . .	297,000	21,262	14.0	17.4	18.9	17.9	370	18	20.0	20.0	18.5	18.5	14.7
Perth . . . . .	84,000	1,753	19.2	18.9	19.1	17.5	140	7	20.0	20.0	19.8	19.8	14.0
Ross and Cromarty . . . . .	160,000	12,492	12.7	14.6	14.6	15.9	47	4	11.1	11.1	11.2	11.2	13.0
Roxburgh . . . . .	131,000	14,555	9.0	12.8	18.7	15.5	1,700	80	21.3	21.3	25.9	25.9	15.6
Selkirk . . . . .	17,000	1,868	9.0	14.5	17.4	15.4	65	8	19.0	19.0	25.0	25.0	18.2
Stirling . . . . .	48,000	3,480	13.4	16.1	17.2	19.3	85	6	18.8	18.8	12.0	12.0	15.6
Southland . . . . .	22,000	2,316	9.5	12.0	17.7	15.8	..	..	..	..	0.6	0.6	12.0
West Lothian . . . . .	87,000	2,770	13.2	18.8	18.0	19.8	310	15	21.0	21.0	29.5	29.5	21.4
Wigtown . . . . .	153,000	10,583	14.5	15.5	19.0	16.8	5,100	265	19.4	19.4	22.5	22.5	17.7
Zetland . . . . .	24,000	1,006	23.7	11.8	10.2	11.4	..	..	..	..	..	..	..
Total . . . . .	4,550,500	858,944	12.9	14.2	16.5	16.4	35,717	1738	20.6	20.6	22.7	22.7	19.3





TABLE No. 7.—HAY from Permanent Grass:—TOTAL PRODUCE, ACREAGE, and YIELD PER ACRE, in 1934, in each COUNTY OF SCOTLAND, distinguishing HAY from TIMOTHY MEADOWS and HAY from OTHER MEADOWS.

COUNTIES.	TIMOTHY MEADOWS.			OTHER MEADOWS.		
	Total Produce in 1934.	Acreage in 1934.	Yield per Acre in 1934.	Total Produce in 1934.	Acreage in 1934.	Yield per Acre in 1934.
	Tons.	Acres.	Cwt.	Tons.	Acres.	Cwt.
Aberdeen . . . . .	240	180	26.9	3,400	3,070	22.1
Angus . . . . .	1,100	635	35.0	2,100	1,550	26.5
Argyll . . . . .	1,500	1,063	28.8	17,000	14,069	23.8
Ayr . . . . .	31,000	12,076	45.6	20,000	11,571	34.5
Banff . . . . .	12	9	26.0	1,600	1,202	25.0
Berwick . . . . .	850	253	29.8	5,200	3,802	27.3
Bute . . . . .	170	108	31.2	600	386	30.8
Caithness . . . . .	55	142	7.6	600	1,639	7.5
Clackmannan . . . . .	2,600	1,039	49.8	200	116	44.4
Dumfries . . . . .	8,000	4,893	32.8	19,000	14,855	25.2
Dunbarton . . . . .	2,300	923	45.5	1,000	1,272	30.0
East Lothian . . . . .	400	175	45.8	1,800	1,406	25.0
Fife . . . . .	4,100	1,744	46.8	5,900	3,495	33.5
Inverness . . . . .	..	..	..	7,800	10,155	15.5
Kincardine . . . . .	120	67	35.0	910	617	22.4
Kimross . . . . .	410	235	34.8	915	559	31.1
Kirkcubright . . . . .	5,100	2,833	36.1	12,000	10,303	23.6
Lanark . . . . .	15,000	7,240	40.6	9,700	7,118	27.3
Mid-Lothian . . . . .	1,800	659	52.0	2,400	2,017	23.9
Moray . . . . .	..	..	..	370	368	19.8
Nairn . . . . .	..	..	..	12	18	13.1
Orkney . . . . .	..	..	..	700	622	22.5
Peebles . . . . .	810	352	48.0	1,800	1,426	24.5
Perth . . . . .	9,100	3,943	48.0	10,500	8,328	23.9
Renfrew . . . . .	9,300	3,861	47.7	4,100	2,037	40.0
Ross and Cromarty . . . . .	230	227	20.1	3,200	3,017	16.1
Roxburgh . . . . .	780	527	29.5	7,400	6,082	21.3
Selkirk . . . . .	240	179	26.8	2,200	2,165	19.0
Stirling . . . . .	13,000	5,295	49.7	3,900	2,790	28.2
Sutherland . . . . .	..	..	..	1,200	1,691	14.2
West Lothian . . . . .	2,100	837	50.2	720	660	21.5
Wigtown . . . . .	2,500	1,372	41.0	8,000	5,665	28.4
Zetland . . . . .	..	..	..	2,900	2,463	23.5
Total . . . . .	112,147	51,499	43.6	160,087	129,235	24.7

TABLE No. 8.—NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS IN EACH COUNTY OF SCOTLAND AS RETURNED ON 4TH JUNE 1934.

COUNTRIES.	HORSES (including Ponies).				CATTLE.				SHEEP.				Pigs.			
	Used solely for Agricultural Purposes, &c.	Unbroken Horses.		Horses in Milk.	Cows in Milk.	Cows in Milk, but not in Milk.	Horses in Milk.	Other Cattle.		Ewes kept for Breeding.	Rams to be used for Service.	Other Sheep.		Hogs & Pigs for Breeding.	Other Pigs.	
		1 Year & Under.	Under 1 Year.					1 Year & Under 2 Years.	Under 1 Year.			1 Year Old and above.	Under 1 Year.			
1. Aberdeen . . .	17,240	2,647	1,217	2,580	88,184	8,800	8,036	85,001	55,208	40,459	148,920	4,807	58,804	189,589	4,806	846
2. Angus . . .	6,474	842	193	413	10,742	1,166	976	18,380	14,408	9,175	86,168	2,981	17,750	94,886	1,606	156
3. Argyll . . .	2,852	184	312	184	10,329	2,464	2,327	801	6,069	12,998	840,373	10,790	102,677	259,568	475	60
4. Ayr . . .	5,769	432	811	297	14,473	7,868	14,473	2,914	23,518	24,252	189,094	4,821	42,695	183,940	1,725	146
5. Banff . . .	4,967	14	376	94	10,698	1,104	788	418	4,639	12,886	11,837	1,362	12,842	51,671	1,087	101
6. Berwick . . .	2,902	14	876	49	478	5,017	1,000	835	6,628	8,990	146,353	5,725	37,199	196,971	1,125	139
7. Bute . . .	787	6	182	53	115	2,668	410	806	1,151	2,294	21,451	646	6,640	18,652	65	6
8. Caithness . . .	3,403	12	495	263	807	6,217	650	970	1,826	5,495	82,250	2,277	20,140	96,339	225	25
9. Clackmannan . . .	4,193	1	76	36	94	1,147	163	245	871	1,182	6,775	243	655	116	14	706
10. Dumfriesshire . . .	1,003	13	801	265	682	22,068	7,263	1,814	8,965	19,702	260,047	7,163	69,175	257,531	1,785	158
11. Dunbarton . . .	1,008	22	149	54	135	5,146	1,147	1,494	1,195	2,983	34,578	1,048	9,797	29,680	281	21
12. East Lothian . . .	2,986	2	178	54	140	5,697	842	810	4,847	2,838	56,188	1,708	17,678	70,780	646	75
13. Fife . . .	5,540	80	749	699	11,800	1,980	2,118	638	12,632	14,473	58,705	1,857	11,214	75,964	1,832	219
14. Inverness . . .	4,809	19	486	179	514	16,583	2,487	1,478	6,851	12,358	234,382	8,890	70,990	165,550	842	45
15. Kincardine . . .	3,065	4	816	134	509	6,097	618	446	265	9,628	90,388	837	4,995	86,191	605	66
16. Kinross . . .	629	1	116	43	40	1,475	487	201	1,031	2,119	15,898	520	3,134	16,561	148	18
17. Kirkcubright . . .	2,753	17	514	205	344	18,252	6,784	1,001	8,752	15,442	177,898	4,816	42,203	173,176	1,382	136
18. Lanark . . .	4,889	83	621	246	578	27,931	7,737	1,594	7,039	18,688	111,400	3,880	82,860	108,859	1,157	104
19. Mid-Lothian . . .	2,309	4	165	45	974	7,174	999	1,014	8,878	3,877	74,933	1,938	26,003	37,941	1,980	188
20. Moray . . .	2,823	11	327	218	252	6,092	686	473	286	2,642	7,919	5,566	22,041	32,653	672	45
21. Nairn . . .	1,801	1	143	41	145	1,939	101	207	110	2,148	9,986	6,091	1,941	15,339	187	27
22. Orkney . . .	4,578	26	635	390	697	8,999	1,810	1,050	268	4,833	10,548	10,870	24,153	760	6,232	84
23. Peebles . . .	577	2	53	23	77	1,888	295	513	121	1,106	2,109	91,392	2,287	35,987	322	8
24. Perth . . .	7,661	86	732	310	749	16,831	2,369	2,425	969	12,106	18,258	261,480	20,848	85,032	1,372	161
25. Renfrew . . .	1,643	8	210	248	10,773	2,778	2,845	597	1,655	4,955	90,937	8,390	71,987	256,640	647	53
26. Ross & Cromarty . . .	4,345	9	411	122	434	13,743	2,126	2,864	400	3,892	7,843	148,363	57,182	122,906	682	76
27. Roxburgh . . .	2,580	24	291	67	591	6,083	1,152	375	989	7,269	297,279	7,809	67,712	122,906	841	65
28. Selkirk . . .	418	3	46	7	86	1,207	173	288	63	2,008	6,048	5,809	265,740	84	51	11
29. Stirling . . .	2,544	16	420	146	340	9,028	2,349	2,780	642	8,293	10,403	6,877	18,019	56,801	569	65
30. Southland . . .	1,418	6	75	49	134	3,399	666	805	68	454	40,858	2,618	13,019	41,693	93	6
31. West Lothian . . .	1,254	8	170	52	151	4,408	535	891	240	2,802	2,263	2,243	2,489	11,617	876	43
32. Wigton . . .	3,032	19	338	274	274	26,260	1,566	4,424	1,032	7,897	11,510	13,126	14,319	67,778	1,846	260
33. Zetland . . .	1,688	10	124	36	1,219	638	370	76	863	2,196	87,177	2,838	80,773	65,060	6	1
Total . . .	112,015	480	14,531	5998	15,032	838,902	55,417	71,908	102,800	324,357	232,604	96,811	924,037	3,279,661	23,894	2,832

\* Including Mares kept for breeding.

† Above two years old used, or intended to be used, for service.

TABLE NO. 9.—QUANTITY AND VALUE OF CORN, &amp;c., imported into the United Kingdom in the undermentioned Years.

[From Trade and Navigation Returns.]

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>Wheat from—</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
British India . . .	..	166,868	159,582	..	59,874	56,645
Australia . . .	29,285,381	21,658,112	17,897,807	8,375,745	5,850,444	5,374,169
Canada . . .	45,570,437	35,702,970	36,897,875	13,510,326	11,366,573	12,838,378
Other British Coun- tries . . .	392,524	8,934	42	113,398	2,175	21
Soviet Union (Russia) . . .	5,754,291	2,095,212	6,904,110	1,859,187	439,192	2,192,098
Germany . . .	4,442,794	2,019,340	171,992	936,547	394,476	45,684
Roumania . . .	749,060	1,583,541	1,831,622	152,552	323,255	478,550
United States of America . . .	5,046	131,424	598,029	1,332	28,089	160,935
Argentine Republic . . .	24,702,481	35,081,038	22,751,126	6,192,216	8,188,171	6,042,511
Other Foreign Coun- tries . . .	1,474,784	4,178,405	14,219,411	863,860	959,658	3,275,181
<b>Total . . .</b>	<b>112,874,798</b>	<b>102,625,844</b>	<b>101,226,546</b>	<b>31,005,043</b>	<b>27,611,902</b>	<b>30,464,222</b>
<b>Wheat products—</b>						
<b>Meal and flour from—</b>						
Australia . . .	2,733,258	1,926,926	1,805,689	994,541	629,336	662,152
Canada . . .	4,323,031	4,226,428	4,224,805	1,857,904	1,806,593	2,015,385
Other British Coun- tries . . .	10,795	977	3,594	4,019	409	1,128
France . . .	1,397,044	1,235,394	837,339	352,408	279,838	248,068
Italy . . .	587,106	411,389	422,250	109,951	62,857	84,290
United States of America . . .	113,886	123,642	89,528	62,670	60,890	43,892
Argentine Republic . . .	363,340	246,132	202,451	93,605	51,389	50,802
Other Foreign Coun- tries . . .	09,887	1,221,251	344,558	77,003	253,053	103,984
<b>Total . . .</b>	<b>9,843,347</b>	<b>9,447,139</b>	<b>7,980,714</b>	<b>3,557,101</b>	<b>2,149,365</b>	<b>3,210,704</b>
<b>Barley . . .</b>	<b>15,934,783</b>	<b>15,476,301</b>	<b>17,107,118</b>	<b>3,744,839</b>	<b>3,893,173</b>	<b>4,180,317</b>
<b>Oats . . .</b>	<b>5,619,731</b>	<b>3,310,213</b>	<b>3,553,526</b>	<b>1,206,553</b>	<b>763,806</b>	<b>1,038,258</b>
<b>Peas, not fresh . . .</b>	<b>1,533,245</b>	<b>1,550,932</b>	<b>1,602,699</b>	<b>1,323,248</b>	<b>1,123,822</b>	<b>903,371</b>
<b>Beans, not fresh . . .</b>	<b>1,049,644</b>	<b>972,431</b>	<b>595,239</b>	<b>438,215</b>	<b>402,205</b>	<b>308,458</b>
<b>Maize . . .</b>	<b>51,315,628</b>	<b>61,350,081</b>	<b>59,503,635</b>	<b>10,271,356</b>	<b>13,333,684</b>	<b>12,183,849</b>
<b>Maize products . . .</b>	<b>2,134,669</b>	<b>2,747,454</b>	<b>4,768,123</b>	<b>591,450</b>	<b>822,290</b>	<b>1,531,302</b>
<b>Oat products . . .</b>	<b>714,329</b>	<b>553,099</b>	<b>419,184</b>	<b>522,794</b>	<b>453,969</b>	<b>450,576</b>
<b>Rice . . .</b>	<b>2,100,073</b>	<b>2,552,332</b>	<b>2,160,395</b>	<b>869,447</b>	<b>938,538</b>	<b>905,117</b>
<b>Other kinds of grain . . .</b>	<b>353,625</b>	<b>675,187</b>	<b>937,217</b>	<b>127,165</b>	<b>232,432</b>	<b>295,633</b>
<b>Other products . . .</b>	<b>965,561</b>	<b>1,696,238</b>	<b>978,993</b>	<b>836,922</b>	<b>1,064,403</b>	<b>723,136</b>
<b>Farinaceous substances not elsewhere speci- fied and Malt . . .</b>	<b>967,096</b>	<b>1,006,493</b>	<b>1,056,306</b>	<b>473,975</b>	<b>503,922</b>	<b>542,779</b>
<b>Total of corn, &amp;c. . .</b>	<b>32,733,932</b>	<b>31,834,746</b>	<b>32,677,445</b>	<b>20,455,969</b>	<b>23,629,339</b>	<b>23,067,326</b>
<b>Total of Group . . .</b>	<b>205,002,077</b>	<b>203,907,229</b>	<b>201,384,705</b>	<b>55,018,113</b>	<b>54,390,606</b>	<b>56,751,752</b>

TABLE NO. 10.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 9 OF GRAIN AND FLOUR imported into the United Kingdom for the years 1933, 1934 and 1935.

	1933.	1934.	1935.
From—	£	£	£
Union of South Africa . . . . .	626,769	782,116	1,641,441
Southern Rhodesia . . . . .	164,272	117,380	52,409
Kenya . . . . .	146,561	6,830	14,326
British India . . . . .	657,564	799,675	782,531
British Malaya . . . . .	247,644	205,583	250,798
Australia . . . . .	9,736,945	6,833,809	6,389,886
Canada . . . . .	16,959,638	16,828,355	17,668,166
Other British Countries . . . . .	245,685	228,709	151,021
Soviet Union . . . . .	2,469,842	943,123	3,598,682
Denmark . . . . .	86,870	109,400	93,279
Germany . . . . .	1,266,880	874,745	177,261
Netherlands . . . . .	788,668	787,220	680,273
Java . . . . .	144,878	185,030	167,929
Belgium . . . . .	508,729	535,958	557,175
France . . . . .	608,333	899,313	2,185,189
Madagascar . . . . .	181,002	124,719	108,688
Spain . . . . .	20,390	181,348	70,624
Italy . . . . .	414,706	114,056	122,658
Roumania . . . . .	1,511,632	1,039,042	788,145
Persia . . . . .	320,649	718,457	43,497
Japan . . . . .	351,783	422,732	394,279
United States of America . . . . .	1,273,197	1,169,334	1,222,587
Chile . . . . .	192,278	277,764	101,515
Argentine Republic . . . . .	15,312,960	20,504,027	17,260,900
Other Foreign Countries . . . . .	830,683	1,251,741	2,258,588
Total . . . . .	55,018,113	54,890,606	56,751,752

TABLE NO. 11.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 16 OF DAIRY PRODUCE imported into the United Kingdom for the years 1933, 1934 and 1935.

	1933.	1934.	1935.
From—	£	£	£
Irish Free State . . . . .	2,361,525	2,331,633	2,474,429
Union of South Africa . . . . .	398,690	254,887	610,316
Australia . . . . .	7,875,057	8,712,501	9,809,611
New Zealand . . . . .	15,399,237	14,859,110	16,136,381
Canada . . . . .	2,245,338	1,639,592	1,888,520
Other British Countries . . . . .	52,324	47,611	203,629
Soviet Union . . . . .	1,661,382	1,120,111	1,678,607
Finland . . . . .	684,108	808,816	744,782
Estonia . . . . .	282,562	395,699	478,659
Latvia . . . . .	489,043	421,228	702,983
Lithuania . . . . .	337,244	432,773	679,372
Sweden . . . . .	964,622	1,037,305	856,751
Norway . . . . .	107,744	53,118	34,015
Denmark . . . . .	13,796,584	12,477,610	13,025,208
Poland . . . . .	509,194	672,166	911,923
Germany . . . . .	63,218	69,256	21,293
Netherlands . . . . .	3,549,330	3,703,212	4,361,982
Belgium . . . . .	304,328	150,433	139,634
France . . . . .	55,088	88,994	85,232
Switzerland . . . . .	107,834	108,495	109,436
Italy . . . . .	351,816	337,249	339,019
China . . . . .	2,373,555	2,424,633	2,363,351
United States of America . . . . .	24,305	39,080	67,744
Argentine Republic . . . . .	755,295	323,454	233,138
Other Foreign Countries . . . . .	319,014	369,113	436,680
Total . . . . .	55,127,437	52,878,129	58,422,625

TABLE No. 12.—QUANTITIES AND VALUES OF CORN AND FOOD PRODUCTS imported into the United Kingdom in the Year 1935, with the Corresponding Figures for 1933 and 1934.

[From Trade and Navigation Returns.]

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>ANIMALS, LIVING:—</b>	No.	No.	No.	£	£	£
Cattle . . . . .	638,607	509,537	599,110	6,362,904	4,403,165	4,683,064
Sheep and lambs . . . .	318,299	362,989	278,909	343,180	436,598	356,812
Pigs . . . . .	143,970	133,918	127,990	300,703	384,774	472,760
Total value . . . . .	1,095,876	1,006,459	1,006,069	7,006,787	5,224,527	5,462,636
<b>GRAIN, FLOUR, &amp;c.:—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Wheat . . . . .	112,374,798	102,625,844	101,226,546	31,005,043	27,611,902	30,464,222
Wheat meal and flour . . .	9,848,847	9,447,139	7,980,714	8,557,101	8,149,865	8,219,704
Barley . . . . .	15,984,783	15,476,801	17,107,118	2,744,589	3,893,173	4,180,817
Oats . . . . .	5,619,731	3,210,213	3,553,526	1,206,558	763,806	1,038,268
Peas, not fresh . . . . .	1,583,945	1,589,932	1,602,099	1,323,248	1,128,822	903,371
Beans, not fresh . . . . .	1,049,694	972,431	595,230	438,215	402,205	308,456
Maize or Indian corn . . .	51,815,626	61,850,031	59,603,685	10,271,356	13,333,684	12,183,849
Malze products . . . . .	2,124,509	2,747,454	4,768,128	591,450	829,290	1,581,302
Oat products . . . . .	714,329	553,099	419,184	522,704	453,969	450,576
All other products . . . . .	965,561	1,695,268	978,908	836,922	1,064,403	728,136
Rice . . . . .	2,100,673	2,552,332	2,160,395	359,447	983,583	905,117
Other kinds of grain . . . .	358,625	675,187	937,217	127,165	262,482	295,633
Farinaceous substances not elsewhere specified	967,096	1,006,493	1,056,306	478,975	503,922	542,779
Total value . . . . .	205,002,077	203,907,329	201,884,705	55,018,118	54,390,606	56,751,752
<b>DAIRY PRODUCTS:—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Butter . . . . .	8,831,686	9,695,394	9,603,620	34,340,921	33,271,706	39,337,657
Margarine . . . . .	32,527	19,598	17,787	52,286	30,825	27,975
Cheese . . . . .	3,039,450	2,983,539	2,713,322	7,611,726	7,014,517	6,647,341
Milk, condensed, un- sweetened	380,851	342,001	293,978	759,749	626,643	519,980
Milk, condensed, sweetened	144,606	122,564	87,712	236,727	196,578	145,463
Milk, separated or skimmed	1,917,789	1,628,200	1,404,624	2,083,925	1,935,136	1,379,996
Milk powder, unsweetened	280,082	251,913	219,380	468,809	461,561	390,756
Cream . . . . .	110,616	85,398	74,739	327,162	248,042	229,728
Other Produce not specified	..	..	..	56,908	45,525	41,860
Total . . . . .	14,737,607	15,133,607	14,419,962	45,938,223	43,830,533	48,720,746
<b>Eggs in Shell . . . . .</b>	Gt. Hunds.	Gt. Hunds.	Gt. Hunds.	£	£	£
	18,872,647	18,734,209	19,773,764	7,306,408	7,061,006	7,776,669
<b>Eggs not in Shell . . . . .</b>	Cwt.	Cwt.	Cwt.	£	£	£
	646,225	440,297	520,455	1,882,806	1,946,590	1,945,210
Total value . . . . .	..	..	..	9,189,214	8,997,596	9,721,879

TABLE No. 13.—QUANTITIES AND VALUES OF MEAT OF ALL KINDS imported into the United Kingdom in the year 1935, with the corresponding figures for 1933 and 1934.

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>BEEF:—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Fresh and salted . . . .	35,446	4,667	2,291	64,575	8,816	8,692
Chilled . . . . .	8,171,820	8,250,658	8,489,022	14,885,265	18,811,605	18,969,280
Frozen . . . . .	1,580,692	2,168,524	1,722,924	1,961,820	2,715,986	2,352,150
Boned . . . . .	661,443	540,240	598,061	980,639	709,515	838,530
Other descriptions . . . .	721,802	700,776	663,706	1,550,576	1,565,113	1,556,100
Tongues—tinned, canned, &c. . . . .	60,194	90,978	89,740	610,944	839,971	775,685
Other parts . . . . .	786,462	856,051	889,801	1,476,446	1,788,063	1,860,415
Extracts and Essences . .	67,700	66,615	61,755	470,597	524,103	406,788
<b>VEAL—frozen . . . . .</b>	168,226	138,711	179,717	284,260	282,486	317,148
<b>MUTTON AND LAMB:—</b>						
Mutton and Lamb—fresh .	44,000	12,882	58,347	119,054	45,855	168,952
Mutton—frozen . . . . .	1,740,281	1,596,815	1,714,092	2,749,075	3,016,003	2,817,155
Lamb—frozen . . . . .	4,912,488	4,881,979	4,985,067	12,049,526	14,581,451	14,579,688
Tinned, canned, &c. . . .	54,002	47,018	63,901	146,807	145,931	197,732
Other descriptions . . . .	180,748	158,466	172,906	384,594	391,558	465,884
<b>PIG PRODUCTS—</b>						
Bacon . . . . .	9,084,353	7,598,262	6,925,654	29,928,321	30,047,164	27,400,254
Hams . . . . .	868,814	728,273	678,779	3,065,768	3,125,058	3,068,816
Pork—fresh . . . . .	194,695	143,771	142,841	493,652	378,700	350,148
Pork—chilled or frozen . .	622,776	1,105,420	915,219	1,678,641	2,926,863	2,509,786
Tongues—tinned, canned, &c. . . . .	175,018	215,727	170,224	947,680	1,890,936	1,156,790
Other descriptions . . . .	171,241	186,834	166,944	277,700	310,892	298,464
<b>RABBITS . . . . .</b>	623,599	692,058	432,909	977,402	1,211,219	945,075
<b>POULTRY—dead . . . . .</b>	500,416	452,193	422,271	1,961,976	1,618,876	1,687,226
<b>GAME—dead . . . . .</b>	15,978	27,180	20,568	67,692	95,167	81,769
<b>Totals . . . . .</b>	31,350,687	30,654,044	29,554,234	77,585,555	81,518,831	77,796,108

TABLE No. 14.—SUMMARY OF TOTAL VALUES appearing in Table 13 of Meat Imported into the United Kingdom for the years 1933, 1934, and 1935.

	Values.		
	1933.	1934.	1935.
<b>From—</b>	£	£	£
Irish Free State . . . . .	1,841,806	2,171,498	2,458,618
Australia . . . . .	5,275,464	7,352,780	7,933,359
New Zealand . . . . .	11,111,957	12,970,474	12,895,257
Canada . . . . .	2,581,250	4,764,708	4,768,078
Other British Countries . .	227,808	220,099	327,798
Soviet Union . . . . .	829,365	256,458	309,802
Lithuania . . . . .	1,215,812	937,682	658,771
Sweden . . . . .	1,841,597	1,185,126	1,041,459
Denmark . . . . .	19,445,067	18,088,874	16,290,895
Poland . . . . .	2,648,543	2,185,402	1,914,453
Netherlands . . . . .	2,897,445	2,604,070	2,227,005
France . . . . .	41,953	56,648	175,572
Austria . . . . .	28,171	68,068	22,880
Hungary . . . . .	688,482	546,657	550,554
United States of America .	3,548,151	4,521,315	8,369,128
Chile . . . . .	516,968	548,911	428,086
Brazil . . . . .	1,216,118	1,289,575	1,275,266
Uruguay . . . . .	2,115,233	1,887,558	2,129,500
Argentine Republic . . . .	19,241,882	18,409,323	17,578,509
Other Foreign Countries . .	1,228,795	1,618,006	1,461,118
<b>Totals . . . . .</b>	77,585,555	81,518,831	77,796,108

TABLE NO. 15.—QUANTITY AND VALUE OF DEAD MEAT imported into the United Kingdom in the undermentioned Years.

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
	Owt.	Owt.	Owt.	£	£	£
<b>BEAF:—</b>						
Fresh and salted—						
Total . . .	35,446	4,667	2,291	64,575	8,816	8,692
Chilled and frozen, from—						
Australia . . .	947,142	1,322,855	1,105,217	1,212,096	1,660,554	1,481,245
New Zealand . . .	431,007	697,146	465,170	510,518	824,611	607,525
Other British Countries . . .	147,558	243,311	486,228	222,475	336,000	799,921
Brazil . . .	522,855	514,575	519,779	841,590	806,828	811,189
Uruguay . . .	588,207	601,947	603,611	996,740	1,001,256	985,895
Argentine Republic . . .	7,065,743	7,089,347	7,031,941	13,013,566	11,848,792	11,696,155
Other Foreign Countries . . .	..	..	..	..	..	..
Total . . .	9,702,012	10,419,182	10,211,946	16,797,085	16,527,541	16,321,430
Boned, including Cheeks and Skirts, from—						
Australia . . .	171,842	193,400	237,166	243,584	262,516	345,660
New Zealand . . .	251,971	214,478	217,489	332,584	257,914	302,567
Other British Countries . . .	49,052	69,711	83,562	64,693	93,110	116,219
Brazil . . .	38,448	18,677	16,343	54,928	24,188	21,815
Uruguay . . .	48,119	10,345	7,735	89,145	15,921	12,332
Argentine Republic . . .	101,997	33,629	25,816	195,685	55,871	39,757
Other Foreign Countries . . .	14	..	..	20	..	..
Total . . .	661,448	540,240	593,061	980,639	709,515	838,350
Other Descriptions from—						
Australia . . .	45,484	54,886	66,212	101,817	128,608	144,841
New Zealand . . .	23,253	19,681	22,253	50,864	44,410	48,548
Other British Countries . . .	24,493	33,143	33,106	51,238	80,104	84,072
United States of America . . .	50,384	78,315	39,789	155,031	217,886	124,593
Brazil . . .	61,610	62,129	58,394	122,544	139,729	136,739
Uruguay . . .	36,051	35,334	37,912	89,025	95,382	93,745
Argentine Republic . . .	477,387	413,645	403,743	978,530	950,991	913,406
Other Foreign Countries . . .	3,190	3,638	2,297	6,527	8,008	5,156
Total . . .	721,502	700,776	668,706	1,550,576	1,665,113	1,556,100
Tinned, canned, &c. Total . . .	69,194	90,976	89,740	610,944	339,971	775,635
Other, including Extracts and Essences Total . . .	854,162	922,668	951,056	1,945,843	2,307,166	2,267,153
<b>VEAL—Frozen</b>						
Total . . .	168,220	133,711	179,717	284,260	232,436	317,143
<b>MUTTON AND LAMB—</b>						
Fresh—Total . . .	44,006	12,882	53,347	119,054	45,855	163,952

TABLE No. 15.—QUANTITY AND VALUE OF DEAD MEAT—Continued.

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>MUTTON—Frozen, from—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Australia . . .	347,409	461,259	424,054	513,354	843,228	698,718
New Zealand . . .	998,547	898,965	1,041,187	1,612,378	1,716,799	1,755,894
Other British Coun- tries . . .	1,763	..	..	2,388	..	..
Chile . . .	140,282	82,258	89,326	214,655	168,574	139,856
Uruguay . . .	33,324	18,690	6,232	54,863	28,260	10,685
Argentine Republic	217,174	187,748	150,428	348,525	261,898	228,068
Other Foreign Coun- tries . . .	1,782	2,895	2,870	2,412	4,744	8,964
Total . . .	1,740,281	1,596,815	1,714,092	2,749,075	3,015,008	2,817,155
<b>LAMB—Frozen from—</b>						
Australia . . .	956,948	1,165,848	1,361,178	2,395,198	3,320,964	3,987,905
New Zealand . . .	2,736,546	2,655,611	2,591,746	7,455,731	8,414,183	8,066,218
Other British Coun- tries . . .	1,404	242	18	8,615	674	51
Chile . . .	124,868	124,067	118,554	200,447	365,115	271,858
Uruguay . . .	138,637	124,702	180,175	314,292	311,953	327,255
Argentine Republic	929,420	788,868	754,885	2,151,109	2,061,564	1,898,714
Other Foreign Coun- tries . . .	25,165	27,641	28,561	59,189	67,008	77,642
Total . . .	4,912,488	4,881,979	4,985,087	12,649,526	14,531,451	14,579,688
<b>Tinned, Canned, &amp;c.</b>						
Total . . .	54,002	47,016	63,901	146,807	145,981	107,732
<b>Other Descriptions</b>						
Total . . .	130,748	158,466	172,906	334,894	391,558	465,824
<b>PIG PRODUCTS:—</b>						
<b>Bacon, from—</b>						
Lithuania . . .	415,520	251,572	166,318	1,201,660	926,137	628,185
Sweden . . .	402,912	296,641	257,409	1,332,630	1,167,910	1,018,409
Denmark . . .	5,524,217	4,287,830	3,828,886	19,133,919	17,699,512	15,968,963
Poland . . .	788,785	468,869	480,456	2,259,027	1,719,220	1,612,682
Netherlands . . .	872,750	607,704	508,669	2,631,140	2,434,765	2,068,858
United States of America . . .	62,901	39,514	20,011	170,792	133,050	77,588
Irish Free State . .	204,803	387,709	458,423	611,957	1,143,691	1,355,014
Canada . . .	506,906	894,284	917,883	1,600,751	3,460,196	3,508,890
Other countries . .	311,109	389,549	341,099	916,345	1,362,694	1,176,270
Total . . .	9,084,853	7,598,282	6,925,654	29,928,221	30,047,164	27,400,254
<b>Hams, from—</b>						
United States of America . . .	564,225	477,503	419,112	2,005,026	2,044,523	1,909,607
Canada . . .	179,652	180,717	190,832	655,185	810,685	894,083
Other countries . .	124,987	70,038	66,835	405,602	269,850	285,126
Total . . .	868,814	728,258	676,779	2,065,768	3,125,058	3,068,816
<b>Pork—Fresh</b>						
Total . . .	194,695	143,771	142,841	498,652	378,700	350,148
<b>Pork—Chilled or frozen, from—</b>						
Australia . . .	65,567	82,425	146,732	162,366	221,044	388,865
New Zealand . . .	278,947	414,275	490,327	662,812	1,109,075	1,279,236
Other British Coun- tries . . .	18,857	27,200	7,656	56,157	73,207	25,656
United States of America . . .	88,559	290,365	77,079	257,446	811,115	250,825
Argentine Republic	166,017	277,526	186,841	416,718	632,246	549,732
Other Foreign Coun- tries . . .	10,729	13,629	6,584	23,642	30,176	16,022
Total . . .	622,776	1,105,420	915,219	1,578,641	2,926,868	2,509,786
<b>Tinned, Canned, &amp;c.</b>						
Total . . .	346,256	402,561	387,168	1,225,330	1,701,828	1,449,260



TABLE No. 15.—QUANTITY AND VALUE OF DEAD MEAT—*Continued.*

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>RABBITS—Fresh</b>						
<b>Total</b> . . .	Cwt. 20,290	Cwt. 17,216	Cwt. 24,910	£ 100,198	£ 70,531	£ 93,619
Frozen, from—						
Australia . . .	434,249	464,404	206,899	463,904	511,290	222,637
Other British Coun- tries . . . . .	35,755	41,968	37,521	42,569	55,522	40,585
Foreign Countries .	317	2,040	1,770	1,439	8,515	6,853
<b>Total</b> . . .	470,321	508,412	246,190	507,912	575,327	270,075
<b>ALL OTHER KINDS—</b>						
<b>Tinned, Canned, &amp;c.</b>						
<b>Total</b> . . .	132,988	166,430	161,809	360,202	559,411	581,881
<b>POULTRY—Dead from—</b>						
Irish Free State . .	102,646	138,530	105,054	401,971	464,923	419,035
Other British Coun- tries . . . . .	14,214	18,402	27,963	63,323	87,063	145,597
Soviet Union (Russia)	43,394	2,618	13,074	154,465	41,247	71,293
Netherlands . . .	24,947	10,061	7,223	124,058	45,159	31,291
France . . . . .	8,332	1,463	2,234	29,934	11,051	12,300
Austria . . . . .	5,627	4,128	3,892	22,419	16,238	15,532
Hungary . . . . .	171,240	128,029	118,696	666,196	455,119	455,235
Yugoslavia . . . .	39,186	56,439	72,820	136,502	177,770	268,806
Other Foreign Coun- tries . . . . .	90,329	85,473	70,415	362,508	314,761	266,137
<b>Total</b> . . .	500,415	452,193	422,271	1,961,376	1,613,376	1,687,226
<b>GAME—Dead</b>						
<b>Total</b> . . . . .	15,978	27,130	20,563	67,692	95,167	81,769
<b>TOTAL of all Meat</b> . .	31,350,687	30,654,044	29,554,234	77,535,655	81,518,831	77,796,103

TABLE NO. 16.—QUANTITIES AND VALUES OF BUTTER, MARGARINE, CHEESE, MILK PRODUCTS, AND EGGS imported into the United Kingdom in each Year from 1933 to 1935 inclusive.

[From Trade and Navigation Returns.]

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
BUTTER from—						
Irish Free State	Cwt. 378,662	Cwt. 468,381	Cwt. 488,476	£ 1,078,676	£ 1,158,190	£ 1,505,197
Union of South Africa . . .	25,558	21,423	82,849	92,393	71,438	343,822
Australia . . .	1,691,662	2,103,866	2,113,650	6,525,456	7,247,039	8,391,009
New Zealand . .	2,511,810	2,676,794	2,637,535	10,192,133	9,826,193	11,575,756
Canada . . .	33,253	54	63,463	151,149	182	344,012
Other British Countries . . .	13,200	13,772	49,964	50,682	46,985	201,788
Soviet Union . .	562,718	491,470	503,192	1,613,077	1,093,231	1,669,721
Finland . . .	133,811	150,849	115,707	521,152	495,905	485,898
Estonia . . .	83,361	122,919	119,179	266,236	350,340	423,864
Latvia . . .	146,121	155,756	192,500	487,282	420,735	697,809
Lithuania . . .	104,259	141,101	180,499	331,552	403,017	633,887
Sweden . . .	226,777	302,296	184,385	860,446	927,682	751,244
Denmark . . .	2,519,126	2,485,810	2,186,350	10,696,219	9,557,089	9,966,184
Poland . . .	217	50,163	99,158	706	140,226	341,176
Netherlands . .	145,770	301,137	464,508	576,329	964,215	1,551,482
Argentine Republic . .	202,251	111,546	69,354	708,280	304,141	229,405
Other Foreign Countries . .	53,130	98,557	58,351	189,173	265,098	225,493
Total . . .	8,831,686	9,695,894	9,608,620	34,340,921	33,271,706	39,337,657
MARGARINE—						
Total . . .	Cwt. 32,527	Cwt. 19,598	Cwt. 17,737	£ 52,296	£ 30,825	£ 27,975
CHEESE from—						
Australia . . .	Cwt. 92,476	Cwt. 114,473	Cwt. 134,249	£ 219,776	£ 250,072	£ 303,768
New Zealand . .	2,059,393	2,092,044	1,763,090	4,888,002	4,677,375	4,198,400
Canada . . .	629,498	520,223	469,331	1,665,115	1,290,331	1,233,560
Other British Countries . . .	13,946	7,873	30,394	37,417	17,965	73,289
Netherlands . .	122,179	127,679	199,204	282,364	268,391	301,473
Switzerland . .	13,791	14,154	14,712	96,593	97,591	100,547
Italy . . .	90,311	93,688	79,893	339,954	329,724	337,171
Other Foreign Countries . .	17,856	18,405	22,449	82,505	83,068	99,133
Total . . .	3,039,450	2,988,539	2,713,322	7,611,726	7,014,517	6,647,341
CREAM—						
Total . . .	Cwt. 110,616	Cwt. 85,393	Cwt. 74,739	£ 327,162	£ 248,042	£ 229,728
MILK—Condensed—						
Unsweetened	Cwt.	Cwt.	Cwt.	£	£	£
Total . . .	380,851	342,001	293,978	759,749	626,643	519,980
Sweetened—						
whole—	Cwt.	Cwt.	Cwt.	£	£	£
Total . . .	144,606	122,564	87,712	236,727	196,578	145,463

TABLE 16.—QUANTITIES AND VALUES OF BUTTER, &c.—*Continued.*

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
MILK—separated or skimmed—	Cwt.	Cwt.	Cwt.	£	£	£
Total .	1,917,789	1,628,200	1,404,624	2,083,920	1,985,136	1,879,996
MILK POWDER—unsweetened—	Cwt.	Cwt.	Cwt.	£	£	£
Total .	280,082	251,913	219,230	468,809	461,561	390,756
EGGS IN SHELL from—	Great Hundreds	Great Hundreds	Great Hundreds.	£	£	£
Irish Free State	3,437,028	3,194,394	2,395,351	998,261	894,642	711,337
Union of South Africa .	454,822	300,262	360,901	270,893	177,663	213,704
Australia .	1,899,382	2,098,943	1,921,198	1,024,594	1,185,697	1,092,220
Other British Countries .	220,861	209,831	145,013	108,672	110,640	80,951
Finland .	478,226	389,461	641,517	155,468	307,040	252,112
Sweden .	202,029	257,805	272,592	104,020	109,343	105,307
Denmark .	6,233,637	6,383,211	6,564,130	2,551,726	2,435,591	2,689,194
Poland .	1,680,894	1,941,836	2,014,888	508,435	531,907	570,634
Netherlands .	1,002,848	944,166	2,678,970	406,624	381,340	1,001,991
Belgium .	449,477	49,021	254,601	222,499	24,543	120,498
China .	1,396,639	1,415,019	1,226,085	603,167	539,577	470,706
Other Foreign Countries .	916,804	1,050,260	1,303,518	351,999	353,023	468,015
Total .	18,372,647	18,734,209	19,773,764	7,306,408	7,051,006	7,776,669
EGGS NOT IN SHELL—	Cwt.	Cwt.	Cwt.	£	£	£
Liquid or frozen from—						
British Coun-tries .	17,087	954	1,736	45,919	2,535	4,881
China .	579,128	800,350	774,045	1,473,060	1,654,433	1,623,529
Other Foreign Countries .	23,740	16,605	17,089	59,756	40,651	43,853
Total .	619,905	817,909	792,870	1,578,735	1,697,669	1,672,203
EGGS—other sorts	Cwt.	Cwt.	Cwt.	£	£	£
Total .	25,320	22,388	27,585	304,071	248,921	272,947
OTHER KINDS OF DAIRY PRO-DUCE—				£	£	£
Total .	...	...	..	56,908	45,525	41,850
Total Value of Dairy Produce	...	...	...	55,127,437	52,878,129	58,442,625

TABLE No. 17.—OTHER ARTICLES AFFECTING AGRICULTURE.

	Quantities.			Values.		
	1933.	1934.	1935.	1933.	1934.	1935.
<b>FRUIT, VEGETABLES, &amp;c.—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Apples . . . . .	7,450,322	5,892,163	7,272,255	6,968,943	5,607,584	7,010,652
Peaches and Nectarines . . . . .	111,479	92,513	107,000	256,478	228,843	225,084
Plums, Greengages, Damsons } . . . . .	264,992	254,824	421,951	547,649	521,959	797,761
Pears . . . . .	1,183,865	1,008,022	1,276,826	1,527,597	1,400,242	1,686,454
Grapes . . . . .	780,801	1,056,545	933,477	1,434,806	1,480,151	1,612,096
Oranges . . . . .	11,554,821	10,404,381	10,302,299	7,989,846	7,450,192	8,196,188
Lemons, Limes, &c. . . . .	1,816,805 Bunches.	1,538,854 Bunches.	1,341,662 Bunches.	995,895	907,860	1,196,418
Bananas . . . . .	15,907,826 Cwt.	17,033,414 Cwt.	20,076,766 Cwt.	4,849,385	4,564,252	4,806,164
Grape-Fruit . . . . .	775,653	965,661	1,190,012	1,058,409	1,157,415	1,351,801
Apricots . . . . .	41,653	75,769	63,024	86,840	109,455	109,958
Nuts used as Fruit . . . . .	884,329	861,621	920,237	2,254,862	2,166,518	2,524,008
Fruit (unenumerated) . . . . .	1,018,564 Bushels.	1,067,295 Bushels.	1,083,807 Bushels.	1,028,647	911,178	1,051,449
Onions . . . . .	10,205,936 Cwt.	10,248,977 Cwt.	10,450,627 Cwt.	1,289,844	1,265,827	1,344,258
Potatoes . . . . .	8,928,000	8,077,047	8,816,377	2,068,408	2,091,052	2,778,953
Tomatoes . . . . .	2,904,599	2,782,507	2,979,510	4,285,682	4,391,766	4,076,898
Vegetables, unenumerated (raw) } . . . . .	Not given.	702,206	644,415	871,870	919,777	885,158
Total value . . . . .	..	..	..	86,959,104	85,174,031	89,682,810
<b>OTHER ARTICLES:—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Lard . . . . .	2,885,308	2,809,012	1,531,111	4,953,100	3,856,377	4,291,232
Wool—sheep and lambs' } . . . . .	Thous. lbs. 952,019	Thous. lbs. 788,532	Thous. lbs. 864,246	35,612,590	37,086,099	35,590,536
Wood and timber—	Loads.	Loads.	Loads.			
Pit-props or pit-wood . . . . .	1,940,538	2,274,016	2,377,578	2,775,099	3,238,108	3,618,812
Sawn soft . . . . .	5,594,531	6,297,454	5,558,063	17,160,865	21,716,397	17,415,231
Staves . . . . .	42,650	62,793	60,910	227,918	333,529	339,881
Oilseed-cake and other } . . . . .	Tons. 1,338,847	Tons. 1,663,168	Tons. 1,608,862	5,950,788	7,429,216	7,709,480
feeding-stuffs						
Seeds—	Cwt.	Cwt.	Cwt.			
Clover and grass . . . . .	238,669	210,056	226,886	450,466	514,127	473,252
Cotton . . . . .	Tons. 455,872	Tons. 542,997	Tons. 665,241	2,599,622	2,887,917	3,727,225
Flax or linseed . . . . .	248,581	184,028	257,804	2,451,072	2,018,608	2,408,585
Rape . . . . .	20,790	20,481	30,388	200,762	187,908	278,678
Soya beans . . . . .	157,428	177,064	158,979	1,060,119	1,004,706	1,048,810
Superphosphates . . . . .	33,245	50,290	30,466	71,498	106,756	60,222
Phosphates of lime . . . . .	342,338	428,048	838,892	429,541	575,855	537,448
Nitrate-sodium . . . . .	Cwt. 38,978	Cwt. 321,900	Cwt. 716,848	9,124	66,905	155,292
Nitrate-potassium . . . . .	105,251	123,221	187,764	84,168	74,316	101,070
Cotton, raw of 100 lb. } . . . . .	Centals. 14,048,872	Centals. 12,625,925	Centals. 12,687,858	35,888,765	34,902,048	35,389,688
Hemp . . . . .	Tons. 74,502	Tons. 90,623	Tons. 95,884	1,454,776	1,738,748	1,874,914
Flax . . . . .	50,661	61,650	56,106	2,548,582	3,142,557	4,120,339
Hides untanned—	Cwt.	Cwt.	Cwt.			
Dry . . . . .	497,453	527,886	546,508	1,311,011	1,413,113	1,398,378
Wet . . . . .	952,269	867,842	1,146,254	2,164,961	1,992,649	2,769,677
Petroleum (refined) . . . . .	Thousand Gallons. 2,049,142	Thousand Gallons. 2,270,499	Thousand Gallons. 2,309,895	26,359,224	27,796,015	29,475,368
Petroleum (crude) . . . . .	892,646	476,006	498,688	3,318,172	4,002,270	4,227,109

TABLE No. 18.—NUMBER AND VALUE OF LIVE CATTLE, SHEEP, PIGS, AND OTHER ANIMALS imported into the United Kingdom in the undermentioned Years. [*From Trade and Navigation Returns.*]

	Number.			Value.		
	1933.	1934.	1935.	1933.	1934.	1935.
	No.	No.	No.	£	£	£
CATTLE, from—						
Irish Free State . . .	582,174	458,164	502,632	5,491,613	3,559,464	4,327,913
Canada . . .	51,488	51,373	6,478	868,291	843,691	105,161
Other countries . . .	..	..	..	..	..	..
Total . . .	633,667	509,537	599,110	6,362,904	4,403,155	4,633,064
SHEEP AND LAMBS, from—						
Irish Free State . . .	318,299	362,989	278,969	348,180	486,598	356,812
Pigs, from—						
Irish Free State . . .	148,970	138,913	127,990	300,708	384,774	472,760
ALL OTHER ANIMALS . . .	571,829	567,521	706,991	45,157	40,579	105,269
Total Value . . .	..	..	..	7,051,944	5,265,106	5,567,905

TABLE No. 19.—NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS imported into Great Britain from Irish Free State in each of the Years 1929-1935.

	1929.	1930.	1931.	1932.	1933.	1934.	1935.
†HORSES:—							
Stallions . . .	495	467	407	267	333	412	375
Mares . . .	3,952	4,087	3,862	3,699	3,905	4,942	4,886
Geldings . . .	4,395	4,528	4,101	4,029	5,058	6,830	6,744
Total . . .	8,842	9,082	8,370	8,095	9,271	12,184	12,005
CATTLE: Oxen, Bulls, and Cows:—							
Fat . . .	389,512	301,128	268,677	223,901	238,086	165,006	219,207
Store . . .	414,308	511,249	431,659	404,189	368,214	390,828	581,816
Other cattle . . .	71,081	31,609	67,808	55,638	44,732	62,664	71,437
Calves . . .	57,618	72,155	65,298	61,201	58,552	38,963	32,204
Total . . .	882,460	966,141	833,440	744,904	709,384	652,456	854,164
SHEEP:—							
Sheep . . .	250,328	300,711	318,847	227,975	169,987	165,257	194,096
Lambs . . .	412,456	389,446	355,448	350,588	282,964	328,850	275,071
Total . . .	662,784	690,157	672,295	578,563	452,951	494,116	470,067
Pigs:—							
Fat . . .	265,147	355,166	424,067	241,458	110,691	150,634	205,026
Store . . .	3,648	3,557	5,893	3,580	3,128	3,795	2,564
Total . . .	268,795	358,723	429,460	245,038	122,814	154,429	207,590

† Not including Army Horses.

TABLE No. 20.—RETURN OF THE AVERAGE PRICES OF WOOL in the Years 1934 and 1935.

Years.	Australian.	South African.	English Fleeces.
	Per lb.	Per lb.	Per lb.
	s. d.	s. d.	s. d.
1934 . . .	1 11½	0 11½	0 9 to 0 11½
1935 . . .	0 11½	0 9½	0 9½ „ 1 2½

## EDINBURGH 'CORN MARKET.

STATEMENT SHOWING THE PRICES OF WHEAT, BARLEY, AND OATS FOR THE YEAR 1935.

The offering of grain by farmers and others in the area of the Market was not resumed during the year. It is hoped that advantage will be taken of the privilege afforded to farmers and merchants of offering grain in the open market, as undoubtedly it enables them to secure the market value, and gives a desirable indication of the true value of the various grains.

The Corn Sales Act of 1921 provides that all sales are to be effected by weight only, and expressed in terms of or by reference to the hundredweight of 112 lb. Experience has proved it to be convenient to quote at a price per 4½ cwt. for Wheat, 4 cwt. for Barley, and 3 cwt. for Oats.

The following statement gives a record of the year's proceedings in Edinburgh Corn Market.

1935.	WHEAT, per 4½ cwt.				BARLEY, per 4 cwt.				OATS, per 3 cwt.				
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		
	s.	d.	s.	d.	£.	d.	s.	d.	s.	d.	s.	d.	
January	2	—	—	—	Holiday				Market				
"	9	22	6	22	0	33	0	28	0	20	6	19	3
"	16	22	0	21	6	32	0	28	0	20	6	19	0
"	23	22	0	21	6	36	0	27	0	20	0	18	9
"	30	21	6	21	0	33	0	25	0	19	6	18	6
February	6	21	6	21	0	32	0	25	0	19	0	18	3
"	13	21	6	21	0	31	0	25	0	19	0	18	0
"	20	21	3	20	6	31	0	25	0	19	0	18	0
"	27	21	6	21	0	34	0	25	0	19	0	18	0
March	6	21	3	20	6	34	0	25	0	19	2	18	0
"	13	21	3	20	6	30	0	24	0	19	6	18	6
"	20	21	3	20	6	30	0	25	0	19	6	18	6
"	27	21	6	21	0	30	0	25	0	20	0	18	6
April	3	22	6	22	0	32	0	25	0	21	0	19	0
"	10	23	0	22	6	35	0	25	0	21	6	20	0
"	17	23	6	23	0	30	0	25	0	22	0	20	0
"	24	24	0	23	6	30	0	24	0	22	0	20	6
May	1	24	0	23	6	28	0	24	0	22	3	21	6
"	8	24	6	24	0	29	0	23	0	22	3	21	6
"	15	25	0	24	6	28	0	23	0	23	0	21	9
"	22	25	6	25	0	28	0	23	0	23	0	22	0
"	29	25	0	24	6	26	0	23	0	23	0	21	0
June	5	24	6	—	—	32	0	23	0	23	0	21	9
"	12	24	6	24	0	26	0	21	0	22	9	21	9
"	19	25	0	—	—	33	0	23	6	22	6	21	9
"	26	25	0	24	6	26	0	23	6	22	6	21	6
July	3	25	6	25	0	26	0	23	6	22	6	21	6
"	10	25	6	25	0	..	..	..	..	22	6	21	0
"	17	25	6	25	0	..	..	..	..	22	6	21	0
"	24	25	0	24	6	..	..	..	..	22	0	20	6
"	31	24	6	24	0	..	..	..	..	21	6	21	0
August	7	24	6	24	0	..	..	..	..	21	0	19	0
"	14	..	..	..	..	..	..	..	..	20	0	10	6
"	21	..	..	..	..	..	..	..	..	19	6	19	0
"	28	..	..	..	..	..	..	..	..	19	0	18	6
September	4	31	0	19	0	33	0	28	0	10	0	18	6
"	11	21	6	21	0	38	0	26	0	18	6	18	0
"	18	22	6	22	0	38	0	26	0	19	0	18	6
"	25	24	0	23	0	38	0	26	0	19	0	17	6
October	2	24	0	23	9	40	0	26	0	19	3	18	0
"	9	26	0	25	6	40	0	25	0	20	0	18	0
"	16	26	6	26	0	40	0	24	0	19	9	18	0
"	23	26	0	25	6	40	0	24	0	19	6	17	9
"	30	25	0	—	—	40	0	24	0	18	3	17	0
November	6	24	6	24	0	40	0	24	0	17	9	17	6
"	13	23	6	23	0	40	0	24	0	16	9	15	9
"	20	23	6	23	0	40	0	24	0	16	6	15	0
"	27	23	6	23	0	40	0	26	0	16	6	14	9
December	4	24	0	23	6	40	0	24	0	16	6	15	0
"	11	24	0	23	6	40	0	26	0	16	6	15	0
"	18	25	0	24	6	40	0	24	0	16	9	15	3
"	24	25	0	24	6	40	0	25	0	16	9	15	0
"	31	25	0	..	..	40	0	25	0	16	9	15	0

## PRICES OF SHEEP SINCE 1818.

TABLE No. 1.—CHEVIOT SHEEP.

Year.	Wethers.			Ewes.			Lambs.		
	s.	d.		s.	d.		s.	d.	
1818	28	0	to 30	0	0	not quoted.	8	0	to 10
1819	25	0	" 27	0	0	15 0 to 17 0	10	6	" 12
1820	20	0	" 25	0	0	16 0 " 17 0	10	0	" 11
1821	18	0	" 20	0	0	14 0 " 16 0	7	6	" 8
1822	12	6	" 13	0	0	8 0 " 8 6	4	6	" 0
1823	10	6	" 13	0	0	7 0 " 10 6	5	6	" 6
1824	14	0	" 19	0	0	7 0 " 9 0	4	6	" 6
1825	29	0	" 32	0	0	15 0 " 19 0	9	0	" 10
1826	17	6	" 21	6	0	13 0 " 15 0	7	0	" 7
1827	15	0	" 24	0	0	not quoted.	7	0	" 8
1828	18	0	" 27	6	0	12 0 to 15 0	7	0	" 8
1829	18	0	" 24	0	0	12 6 " 14 0	7	0	" 8
1830	16	0	" 21	0	0	8 0 " 11 0	6	0	" 6
1831	18	0	" 25	0	0	9 0 " 13 6	7	0	" 8
1832	19	0	" 24	0	0	11 0 " 16 0	7	0	" 9
1833	22	0	" 31	0	0	13 6 " 20 0	8	0	" 11
1834	22	0	" 31	0	0	13 6 " 21 6	9	0	" 11
1835	22	0	" 27	6	0	18 0 " 20 6	8	0	" 11
1836	24	6	" 31	6	0	16 0 " 19 0	10	0	" 14
1837	19	0	" 28	0	0	14 0 " 19 0	10	0	" 13
1838	23	0	" 30	6	0	17 0 " 22 0	12	0	" 14
1839	23	0	" 31	0	0	14 0 " 19 0	0	0	" 13
1840	24	0	" 33	0	0	15 0 " 23 0	7	0	" 11
1841	23	0	" 30	0	0	14 0 " 22 0	8	0	" 12
1842	22	6	" 28	0	0	13 0 " 17 0	7	6	" 10
1843	19	0	" 25	0	0	8 0 " 12 0	5	0	" 8
1844	21	0	" 29	0	0	10 0 " 16 0	8	0	" 10
1845	23	0	" 33	0	0	13 0 " 20 0	8	0	" 13
1846	24	0	" 33	6	0	14 6 " 21 6	10	0	" 14
1847	24	0	" 35	0	0	13 0 " 24 6	11	6	" 15
1848	23	0	" 34	6	0	13 0 " 28 0	11	6	" 15
1849	21	0	" 30	2	0	12 0 " 21 0	0	0	" 14
1850	20	6	" 29	6	0	12 0 " 20 0	8	0	" 13
1851	21	6	" 31	0	0	13 0 " 21 0	8	9	" 14
1852	21	0	" 32	0	0	15 0 " 23 0	8	0	" 14
1853	26	6	" 38	0	0	17 0 " 28 6	9	0	" 17
1854	25	0	" 36	0	0	17 0 " 26 0	9	0	" 16
1855	23	6	" 36	0	0	16 0 " 25 0	10	0	" 17
1856	22	0	" 35	6	0	15 6 " 24 0	10	0	" 15
1857	24	0	" 36	0	0	14 6 " 26 0	10	6	" 14
1858	24	0	" 34	6	0	14 0 " 24 6	10	6	" 14
1859	25	0	" 34	6	0	16 0 " 25 0	10	3	" 14
1860	26	0	" 38	0	0	17 6 " 27 6	12	6	" 17
1861	25	0	" 33	6	0	16 0 " 28 0	9	0	" 16
1862	27	0	" 37	6	0	17 6 " 28 0	10	0	" 16
1863	25	0	" 38	6	0	19 0 " 28 6	10	6	" 16
1864	31	0	" 41	0	0	21 0 " 31 6	14	0	" 18
1865	32	6	" 44	0	0	22 6 " 33 6	14	6	" 20
1866	37	0	" 50	0	0	29 0 " 42 6	15	0	" 26
1867	26	0	" 53	0	0	18 0 " 25 6	12	0	" 16
1868	30	0	" 32	0	0	15 6 " 21 0	7	6	" 13
1869	28	0	" 33	0	0	15 0 " 22 6	7	6	" 14
1870	35	6	" 43	0	0	18 0 " 28 0	10	0	" 17
1871	36	6	" 49	0	0	22 0 " 33 6	14	0	" 20
1872	45	0	" 56	0	0	32 0 " 42 0	16	0	" 22
1873	42	0	" 51	0	0	25 0 " 42 0	15	6	" 22
1874	33	6	" 44	6	0	21 0 " 36 0	12	0	" 17

TABLE No. 1.—CHEVIOT SHEEP—Continued.

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.			
1875	38	0	to	48	6	21	0	to	34	0	13	6	to	23	6
1876	40	0	"	52	6	23	0	"	30	0	13	6	"	25	0
1877	41	0	"	51	0	25	0	"	37	0	15	0	"	24	0
1878	35	6	"	48	0	23	6	"	35	0	14	0	"	22	0
1879	34	0	"	44	0	21	0	"	34	0	14	0	"	20	0
1880	30	0	"	43	6	20	0	"	30	0	12	6	"	20	0
1881	32	0	"	45	6	29	0	"	34	0	14	0	"	20	0
1882	40	0	"	51	0	30	0	"	40	0	14	0	"	20	6
1883	44	0	"	55	6	34	6	"	46	6	15	6	"	23	0
1884	36	0	"	47	6	29	6	"	41	6	12	6	"	20	0
1885	30	0	"	38	0	24	0	"	31	0	12	0	"	18	0
1886	32	0	"	40	0	21	0	"	29	0	12	6	"	19	0
1887	29	0	"	36	0	18	0	"	26	0	11	0	"	16	6
1888	30	0	"	38	0	19	0	"	27	0	12	0	"	17	6
1889	36	0	"	44	0	24	0	"	32	0	14	0	"	22	0
1890	31	0	"	40	0	22	0	"	30	0	12	6	"	20	0
1891	27	0	"	38	0	16	0	"	25	0	9	0	"	16	0
1892	22	0	"	30	6	13	0	"	22	0	5	0	"	11	0
1893	26	0	"	35	6	18	0	"	28	6	8	6	"	15	0
1894	26	0	"	37	0	20	0	"	31	0	10	6	"	18	6
1895	28	0	"	39	0	22	0	"	34	0	11	6	"	19	6
1896	24	6	"	34	0	19	0	"	30	6	9	0	"	16	6
1897	27	0	"	36	0	21	0	"	31	6	11	0	"	17	6
1898	27	0	"	37	0	22	0	"	32	6	12	0	"	18	6
1899	24	0	"	33	0	20	0	"	30	6	10	6	"	16	0
1900	26	0	"	36	0	22	0	"	32	6	12	0	"	17	0
1901	25	0	"	32	6	20	0	"	29	6	11	0	"	16	0
1902	24	0	"	31	6	18	0	"	27	0	9	6	"	14	6
1903	26	0	"	34	0	21	0	"	31	0	11	4	"	18	0
1904	28	6	"	36	6	23	0	"	32	6	13	0	"	20	0
1905	27	6	"	35	0	23	0	"	33	0	14	0	"	21	0
1906	30	0	"	38	0	26	0	"	34	6	15	0	"	23	0
1907	28	0	"	34	0	22	0	"	30	6	13	6	"	19	6
1908	26	0	"	32	6	21	0	"	27	6	11	6	"	17	0
1909	24	0	"	31	0	18	0	"	25	6	9	6	"	16	0
1910	27	0	"	35	0	22	0	"	31	0	12	0	"	20	0
1911	24	0	"	31	6	18	6	"	27	6	10	6	"	18	0
1912	26	0	"	34	6	22	0	"	31	6	13	0	"	21	0
1913	30	0	"	39	0	24	0	"	35	6	16	0	"	24	0
1914	32	6	"	41	0	25	0	"	39	0	18	0	"	27	6
1915	36	0	"	46	0	31	0	"	44	0	20	0	"	30	6
1916	40	6	"	51	0	34	0	"	49	0	22	0	"	34	6
1917	43	6	"	56	0	38	0	"	56	0	24	0	"	34	0
1918	50	0	"	66	0	42	0	"	61	0	25	0	"	37	0
1919	53	0	"	69	0	44	6	"	67	0	28	0	"	40	6
1920	56	0	"	71	0	48	0	"	79	0	34	0	"	49	0
1921	45	0	"	60	0	52	8	"	85	9	33	9	"	52	3
1922	40	0	"	56	0	56	0	"	90	6	27	0	"	50	0
1923	44	0	"	65	0	61	0	"	106	0	30	0	"	62	0

Year.	Wethers.				Ewes.				Lambs.											
	s.	d.	s.	d.	s.	d.	s.	d.	Wethers.		Ewes.									
1924	41	0	to	61	0	60	0	to	100	0	81	6	to	58	0	40	0	to	35	6
1925	39	8	"	50	0	56	0	"	88	9	22	8	"	50	6	36	0	"	32	0
1926	35	0	"	49	3	34	6	"	64	6	26	8	"	42	0	28	6	"	66	6
1927	28	9	"	46	3	32	6	"	55	6	23	8	"	39	0	25	8	"	52	0
1928	28	8	"	48	6	30	6	"	55	6	22	9	"	47	0	28	0	"	45	0
1929	33	6	"	54	6	34	6	"	62	0	25	6	"	47	0	30	6	"	51	9
1930	36	0	"	54	0	35	0	"	74	6	24	0	"	47	3	30	0	"	59	0
1931	24	0	"	45	6	23	0	"	50	6	17	0	"	37	0	21	0	"	37	6
1932	16	0	"	26	6	18	0	"	36	6	10	6	"	24	6	12	0	"	33	0
1933	16	0	"	28	0	25	8	"	40	0	16	6	"	31	6	19	6	"	33	0
1934	16	0	"	34	8	22	6	"	44	6	19	8	"	33	3	13	6	"	43	6
1935	22	0	"	37	8	21	0	"	44	8	16	0	"	35	3	17	0	"	40	6



TABLE NO. 2.—BLACKFACE SHEEP.

Year.	Wethers.		Ewes.		Lambs.	
	s.	d.	s.	d.	s.	d.
1819	22	0 to 24	12	0 to 15	8	0 to 9
1820	20	0 " 23	15	6 " 17	7	0 " 8
1821	18	0 " 20	12	0 " 18	6	0 " 7
1822	11	6 " 13	5	6 " 6	4	6 " 0
1823	12	0 " 16	5	0 " 6	4	0 " 5
1824	9	6 " 13	6	0 " 7	4	0 " 5
1825	22	0 " 26	11	0 " 13	6	0 " 9
1826	18	0 " 17	8	0 " 9	4	6 " 6
1827	14	0 " 18	7	0 " 10	6	0 " 7
1828	15	0 " 20	8	0 " 11	5	0 " 7
1829	14	0 " 18	9	0 " 10	6	0 " 7
1830	9	6 " 13	4	0 " 6	4	6 " 6
1831	13	0 " 17	5	0 " 7	5	0 " 6
1832	14	0 " 18	7	0 " 11	6	0 " 7
1833	16	0 " 24	7	6 " 12	6	6 " 9
1834	16	0 " 22	10	0 " 13	6	0 " 8
1835	15	0 " 18	10	0 " 18	7	0 " 8
1836	15	0 " 21	9	0 " 12	8	6 " 11
1837	13	0 " 16	8	0 " 12	8	0 " 9
1838	15	0 " 20	10	0 " 18	not quoted.	
1839	15	0 " 22	10	0 " 12	7	0 to 8
1840	15	0 " 22	11	0 " 12	7	0 " 9
1841	16	0 " 20	9	0 " 11	6	0 " 8
1842	14	0 " 19	7	6 " 8	5	6 " 7
1843	not quoted.		4	9 " 6	not quoted.	
1844	15	0 to 21	6	6 " 10	5	0 to 8
1845	14	0 " 23	8	0 " 12	6	0 " 8
1846	13	0 " 24	10	0 " 13	8	0 " 9
1847	20	6 " 25	10	0 " 14	8	6 " 9
1848	20	0 " 24	11	3 " 12	8	6 " 10
1849	not quoted.		not quoted.		7	0 " 7
1850	not quoted.		not quoted.		7	0 " 0
1851	17	6 to 23	9	0 to 12	6	6 " 8
1852	18	6 " 22	9	6 " 12	4	6 " 7
1853	23	0 " 27	14	6 " 16	8	0 " 11
1854	20	0 " 26	11	0 " 16	8	0 " 10
1855	23	6 " 26	14	0 " 16	10	0 " 11
1856	17	0 " 24	10	0 " 20	7	6 " 10
1857	20	6 " 29	10	6 " 15	9	3 " 11
1858	20	0 " 27	9	9 " 18	8	3 " 10
1859	20	0 " 25	10	0 " 14	8	9 " 11
1860	21	0 " 27	11	0 " 16	10	0 " 13
1861	21	0 " 29	12	0 " 22	6	3 " 14
1862	16	9 " 27	12	0 " 18	6	0 " 12
1863	20	0 " 30	13	0 " 16	8	0 " 11
1864	25	0 " 30	15	0 " 19	10	0 " 13
1865	15	6 " 32	15	0 " 25	10	0 " 17
1866	31	6 " 40	20	0 " 36	13	6 " 22
1867	20	0 " 30	14	0 " 22	7	6 " 13
1868	20	0 " 26	10	6 " 18	7	0 " 18
1869	22	0 " 28	11	0 " 14	6	9 " 9
1870	27	0 " 32	13	0 " 22	8	0 " 14
1871	23	0 " 37	13	0 " 23	11	0 " 16
1872	31	6 " 45	18	0 " 32	12	6 " 18
1873	28	0 " 39	16	6 " 27	7	0 " 16
1874	25	0 " 35	13	0 " 30	7	0 " 14
1875	26	6 " 37	15	0 " 21	9	6 " 17
1876	30	6 " 40	19	0 " 24	18	0 " 20
1877	35	0 " 38	18	0 " 25	13	6 " 23
1878	30	0 " 36	17	0 " 23	12	0 " 22
1879	25	0 " 35	16	0 " 24	10	6 " 20
1880	25	0 " 33	16	6 " 22	10	0 " 17
1881	30	0 " 39	15	0 " 23	10	0 " 15
1882	33	0 " 46	20	0 " 28	12	6 " 18
1883	36	0 " 50	24	6 " 33	14	0 " 21
1884	29	0 " 43	19	6 " 28	12	0 " 19
1885	24	0 " 34	13	0 " 22	10	0 " 15
1886	25	6 " 34	12	0 " 22	10	6 " 16
1887	22	0 " 30	11	0 " 19	8	0 " 13
1888	22	0 " 32	13	0 " 24	10	0 " 15
1889	26	6 " 49	18	0 " 29	13	0 " 22

TABLE NO. 2.—BLACKFACE SHEEP—Continued.

Year.	Wethers.				Ewes.				Lambs.			
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1890	24	0	to	37	0	14	0	to	27	0	10	6
1891	21	0	"	37	0	10	0	"	24	0	7	6
1892	16	0	"	28	6	6	0	"	17	0	3	0
1893	21	0	"	37	0	12	0	"	24	0	7	0
1894	20	0	"	37	0	14	6	"	26	6	8	6
1895	23	0	"	41	0	16	0	"	28	6	9	0
1896	19	0	"	35	4	13	0	"	24	0	6	0
1897	21	0	"	36	6	15	0	"	25	6	7	0
1898	22	0	"	37	0	16	0	"	26	6	8	0
1899	20	0	"	38	6	13	0	"	24	0	5	6
1900	23	0	"	38	0	16	0	"	26	6	8	0
1901	20	0	"	35	0	14	0	"	25	6	6	6
1902	18	6	"	34	0	12	0	"	24	0	6	0
1903	21	0	"	36	0	15	0	"	28	0	7	0
1904	23	0	"	38	6	18	0	"	30	0	8	6
1905	21	6	"	37	0	19	0	"	31	0	9	0
1906	23	0	"	38	0	20	0	"	33	0	10	0
1907	21	0	"	33	6	17	0	"	28	0	8	6
1908	19	6	"	30	0	15	0	"	24	6	8	0
1909	17	0	"	28	0	11	6	"	22	0	6	3
1910	21	0	"	32	6	16	0	"	27	6	8	0
1911	19	0	"	29	6	14	0	"	24	0	7	0
1912	21	6	"	32	6	17	0	"	27	6	9	6
1913	24	6	"	36	0	21	0	"	31	0	12	6
1914	27	0	"	38	6	25	0	"	34	6	15	6
1915	31	0	"	42	6	29	0	"	39	6	17	0
1916	33	0	"	46	6	31	0	"	42	0	19	0
1917	36	0	"	51	0	33	0	"	47	0	21	0
1918	41	0	"	56	0	36	0	"	50	0	27	0
1919	44	0	"	62	0	39	0	"	54	0	29	0
1920	46	0	"	66	0	44	0	"	62	0	31	0
1921	32	9	"	60	9	35	3	"	62	6	20	3
1922	40	3	"	63	0	40	6	"	74	0	18	0
1923	46	0	"	65	6	43	0	"	78	0	21	0
1924	46	0	"	68	6	45	6	"	85	0	25	0
1925	36	0	"	60	0	40	0	"	78	0	17	6

Year.	Wethers.		Ewes.		Lambs.						
	s.	d.	s.	d.	Wethers.		Ewes.				
1926	30	0	to	54	0	21	9	to	50	0	
1927	26	6	"	48	0	17	9	"	40	0	
1928	29	0	"	45	9	16	6	"	38	6	
1929	29	9	"	46	0	20	9	"	43	0	
1930	31	6	"	45	0	20	0	"	45	9	
1931	19	6	"	29	9	14	3	"	36	9	
1932	12	0	"	19	6	7	3	"	18	6	
1933	..	..	..	..	20	0	"	34	0	11	0
1934	..	..	..	..	22	6	"	41	0	16	6
1935	..	..	..	..	26	0	"	40	0	16	0

TABLE No. 3.—PRICE OF WOOL, PER STONE OF 24 LB., SINCE 1818.

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1818	40 0	to 42 2	..	..	20 0	to 22 6	..	..
1819	21 0	" 22 0	..	..	10 0	" 10 8	..	..
1820	20 0	" 22 0	..	..	9 0	" 10 0	..	..
1821	18 0	" 20 0	..	..	9 0	" 10 0	..	..
1822	12 6	" 14 6	..	..	5 0	" 6 6	..	..
1823	9 0	" 10 6	..	..	5 0	" 5 9	..	..
1824	18 6	" 15 0	..	..	6 0	" 6 8	..	..
1825	10 6	" 22 0	..	..	10 0	" 10 6	..	..
1826	11 0	" 14 0	..	..	5 0	" 5 6	..	..
1827	11 0	" 14 0	..	..	5 6	" 6 9	..	..
1828	8 0	" 11 0	..	..	5 6	" 6 0	..	..
1829	8 6	" 11 0	..	..	4 8	" 0 0	..	..
1830	9 6	" 11 0	..	..	4 6	" 5 0	..	..
1831	17 0	" 20 0	..	..	7 6	" 8 6	..	..
1832	14 0	" 16 0	..	..	7 0	" 7 6	..	..
1833	18 0	" 20 7	..	..	10 0	" 11 0	..	..
1834	21 0	" 24 6	..	..	5 6	" 7 0	..	..
1835	19 0	" 20 6	..	..	9 6	" 10 8	..	..
1836	21 0	" 25 0	..	..	10 0	" 14 0	..	..
1837	12 0	" 14 0	..	..	7 0	" 7 8	..	..
1838	19 0	" 22 6	..	..	6 0	" 10 0	..	..
1839	18 0	" 20 0	..	..	8 0	" 12 0	..	..
1840	15 9	" 0 0	..	..	7 0	" 0 0	..	..
1841	15 0	" 16 9	..	..	6 0	" 7 5	..	..
1842	12 6	" 14 0	..	..	not quoted.	..	..	..
1843	9 0	" 11 6	..	..	5 0	to 6 0	..	..
1844	15 0	" 18 0	..	..	not quoted.	..	..	..
1845	14 6	" 17 6	..	..	7 6	to 8 6	..	..
1846	12 0	" 14 6	..	..	8 0	" 8 6	..	..
1847	12 6	" 14 0	..	..	not quoted.	..	..	..
1848	9 6	" 11 0	..	..	4 9	to 0 0	..	..
1849	12 0	" 16 6	..	..	6 0	" 6 8	..	..
1850	15 0	" 17 6	..	..	8 0	" 8 6	..	..
1851	12 0	" 16 0	..	..	8 0	" 9 8	..	..
1852	13 0	" 15 0	..	..	8 0	" 9 0	..	..
1853	19 0	" 22 0	..	..	11 0	" 12 6	..	..
1854	12 0	" 15 0	..	..	7 6	" 8 6	..	..
1855	14 6	" 19 0	..	..	8 6	" 9 0	..	..
1856	19 0	" 21 6	..	..	11 0	" 0 0	..	..
1857	19 0	" 24 0	..	..	18 0	" 14 8	..	..
1858	15 0	" 17 0	..	..	8 9	" 10 0	..	..
1859	18 6	" 24 0	..	..	10 9	" 11 6	..	..
1860	22 0	" 32 0	37 0	to 38 0	10 0	" 11 8	..	..
1861	19 6	" 27 0	from 80s. upwards	..	not quoted.	..	..	..
1862	18 6	" 26 0	80 0	to 87 0	11 6	to 16 0	..	..
1863	25 6	" 31 0	38 0	" 42 0	15 8	" 17 6	..	..
1864	31 0	" 39 0	47 0	" 54 0	17 6	" 20 0	..	..
1865	23 0	" 30 0	44 0	" 45 0	15 0	" 17 0	..	..
1866	24 0	" 30 0	80 0	" 38 0	14 0	" 16 0	..	..
1867	16 0	" 21 6	not quoted.	..	not quoted.	..	..	..
1868	19 0	" 26 0	28 0	to 32 0	8 6	to 9 0	..	..
1869	18 0	" 26 6	not quoted.	..	8 6	" 10 0	..	..
1870	15 0	" 28 6	25 0	to 26 0	9 6	" 0 0	..	..
1871	20 0	" 26 6	30 0	" 34 6	12 0	" 15 0	..	..
1872	26 0	" 37 6	40 0	" 48 0	18 0	" 21 0	..	..
1873	17 0	" 18 0	34 0	" 40 0	9 0	" 12 0	..	..
1874	18 6	" 26 6	30 0	" 34 0	9 6	" 18 0	..	..
1875	25 0	" 32 0	34 6	" 36 0	12 6	" 16 0	..	..
1876	20 0	" 24 0	30 0	" 34 6	9 6	" 12 0	..	..
1877	20 9	" 26 0	28 0	" 30 0	10 0	" 12 0	..	..
1878	18 9	" 25 0	27 0	" 32 0	8 6	" 11 6	..	..
1879	15 0	" 17 0	prices very low.	..	7 0	" 0 0	..	..
1880	20 0	" 24 0	30 0	to 32 0	16 6	" 11 6	14 0	to 15 0
1881	17 0	" 21 0	27 0	" 30 0	5 0	" 9 6	12 0	" 18 0
1882	14 0	" 18 0	27 6	" 28 0	7 6	" 9 0	18 0	" 14 0
1883	13 0	" 18 0	26 0	" 28 0	6 6	" 8 6	11 6	" 12 6
1884	13 0	" 18 0	26 0	" 28 0	6 6	" 8 6	11 6	" 12 6
1885	12 0	" 17 0	22 6	" 26 0	6 0	" 8 0	11 6	" 12 0
1886	18 0	" 18 0	23 0	" 27 6	6 6	" 8 6	11 6	" 12 0
1887	14 0	" 22 0	23 0	" 28 0	7 0	" 9 0	11 6	" 18 0
1888	18 0	" 20 0	23 0	" 28 0	7 0	" 9 0	11 0	" 12 6

TABLE NO. 3.—PRICE OF WOOL—*Continued.*

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1889	18 0	to 18 0	24 0	to 28 0	7 0	to 9 0	11 0	to 12 6
1890	18 0	" 18 0	24 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1891	12 6	" 18 0	22 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1892	12 0	" 18 0	20 0	" 28 0	7 0	" 8 6	10 6	" 12 0
1893	12 0	" 17 0	20 0	" 27 0	7 0	" 8 0	10 0	" 12 0
1894	12 0	" 16 0	20 0	" 26 0	7 0	" 8 0	10 0	" 12 0
1895	12 0	" 16 0	20 0	" 25 0	7 0	" 8 0	10 0	" 11 6
1896	11 0	" 15 0	19 0	" 24 0	7 0	" 8 0	10 0	" 11 6
1897	11 0	" 14 0	18 0	" 23 0	7 0	" 8 0	10 6	" 12 0
1898	10 0	" 13 0	16 0	" 20 0	7 0	" 8 0	10 0	" 11 6
1899	10 0	" 13 0	18 0	" 18 6	7 0	" 8 0	8 6	" 9 6
1900	9 9	" 12 0	13 0	" 18 6	5 9	" 7 9	8 0	" 9 6
1901	9 0	" 10 0	11 0	" 16 6	5 9	" 6 6	8 0	" 9 0
1902	9 0	" 10 0	11 6	" 17 0	6 0	" 6 6	8 6	" 9 6
1903	10 0	" 12 0	15 0	" 18 0	7 0	" 8 0	11 6	" 12 6
1904	15 0	" 17 0	20 0	" 21 0	9 0	" 10 0	14 0	" 15 0
1905	17 0	" 20 0	24 0	" 26 0	10 0	" 11 0	15 0	" 16 0
1906	18 0	" 21 0	27 0	" 28 6	11 6	" 18 0	18 6	" 17 6
1907		*	22 0	" 24 0	11 0	" 12 6	16 0	" 17 0
1908		*	16 0	" 18 0		†	8 0	" 8 6
1909		*	24 0	" 26 0		†	12 6	" 14 0
1910		*	25 0	" 30 0		†	13 0	" 14 6
1911		*	25 0	" 30 0		†	18 0	" 14 6
1912		*	24 0	" 29 0		†	14 0	" 15 0
1913		*	25 0	" 30 0		†	17 0	" 18 0
1914		*	24 0	" 29 0		†	15 0	" 15 6
1914†		*	42 0	" 46 0		†	21 0	" 22 0

\* No Cheviots smeared now.

† No Highlands smeared now.

‡ These are July prices.

## PRICE OF WOOL PER STONE OF 24 LB.—Continued.

		CHEVIOT.				HALF-BRED.				BLACK-FACE.		CROSS-BRED (BLACKFACE EWE AND LEICESTER RAM).			
		Hogg.		EWE AND WETHER.		Hogg.		EWE AND WETHER.		Hogg.	EWE AND WETHER.	Hogg.		EWE AND WETHER.	
		Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.			Washed.	Un- washed.	Washed.	Un- washed.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1916	CAITHNESS & SUTHERLAND	36 6	30 0	33 0	27 6	34 6	28 6	33 0	27 6	28 0	28 0	28 6	25 6	28 6	25 6
1917	CAITHNESS & SUTHERLAND	40 6	32 6	34 0	29 0	35 0	29 0	34 0	28 6	25 6	25 6	31 6	28 6	31 0	28 6
1918	CAITHNESS & SUTHERLAND	48 6	35 6	39 0	33 0	41 0	33 6	39 6	33 0	27 0	27 0	33 6	30 6	33 6	30 6
1919	CAITHNESS & SUTHERLAND	84 0	70 0	82 0	66 0	82 0	62 0	70 0	58 0	84	34 0	46 0	39 0	44 0	38 0
1920	CAITHNESS & SUTHERLAND	86 0	70 0	83 0	66 0	74 0	54 0	65 0	50 0	24 0	24 0	35 0	29 0	34 0	27 0
1921	CAITHNESS & SUTHERLAND	22 0	17 0	19 0	15 0	18 6	14 6	16 0	13 0	9 6	9 6	12 0	10 0	12 0	10 0
1922	CAITHNESS & SUTHERLAND	30 0	25 0	26 0	22 0	26 0	20 0	22 0	18 0	16 0	16 0	16 0	15 0	16 6	15 0
1923	CAITHNESS & SUTHERLAND	41 0	34 0	36 0	30 0	33 0	27 0	30 0	25 0	17 6	17 6	20 0	18 0	20 0	18 0
1924	CAITHNESS & SUTHERLAND	58 0	49 0	53 0	45 0	49 0	40 0	45 0	39 0	25 6	25 6	34 6	30 6	33 0	30 0
1925	CAITHNESS & SUTHERLAND	39 0	34 0	36 0	30 0	33 6	28 6	32 0	27 0	25 6	25 6	26 0	23 6	25 6	23 0
1926	CAITHNESS & SUTHERLAND	40 0	35 0	37 0	31 0	34 0	29 0	33 0	28 0	19 0	19 0	22 6	20 0	22 0	19 6
1927	CAITHNESS & SUTHERLAND	35 0	29 0	32 0	28 0	32 0	26 6	28 0	24 6	24 0	24 0	27 0	25 6	27 0	25 0
1928	CAITHNESS & SUTHERLAND	51 0	43 0	48 0	41 0	47 0	40 0	43 0	37 0	24 0	24 6	33 0	31 0	32 0	30 0
1929	CAITHNESS & SUTHERLAND	37 0	32 0	34 0	29 0	34 0	29 0	32 0	27 0	24 0	24 0	27 0	25 0	26 0	24 0
1930		28 0	19 0	22 0	18 0	21 0	17 6	20 0	16 6	12 0	12 0	17 6	15 6	16 0	15 6
1931		16 6	13 6	15 6	13 0	15 0	13 0	13 6	11 6	11 0	11 0	12 0	10 6	11 6	10 0
1932		14 6	11 6	14 0	11 6	12 6	11 6	11 6	9 6	8 0	8 0	9 0	8 6	8 0	7 6
1933		20 0	17 0	19 0	16 0	18 0	16 0	17 0	14 0	11 6	11 6	12 0	11 0	11 6	11 0
1934		21 6	17 6	21 0	17 0	19 0	17 0	17 0	14 0	10 0	10 0	12 0	11 0	12 0	11 0
1935		26 0	21 0	24 6	19 6	21 6	19 0	19 0	17 0	10 6	10 6	14 0	12 6	14 0	12 6

1 The prices given were prices fixed by Government, and not free market prices.

## GENERAL SHOW AT ABERDEEN, 1935.

THE Society's One hundred and fourth Show was held at Aberdeen on Tuesday, 18th June, and three following days. It was the thirteenth Show to be held in the Aberdeen Show Division, all these having been held in the City of Aberdeen.

On this occasion the Corporation of Aberdeen kindly placed at the disposal of the Society an excellent site on the lands of Seaton. The site was ample in extent, and readily accessible from the centre of the town, being situated near the Bridge of Don, to which a good service of tramcars and motor-buses was available.

In addition to the site, the Corporation, through its Links and Parks Department, carried out such levelling as was required, and by means of top-dressing and mowing greatly improved the surface of the ground. The Corporation also gave a free supply of water and laid both gas and electric current on to the ground, and in many other ways did their utmost to ensure the success of the Show.

During the three weeks prior to the Show heavy rainfalls were experienced, with the result that certain low-lying parts of the Showground became water-logged, and it was only after considerable trouble that the water was drained away and these parts made suitable for the Show.

There was a good entry of Live Stock. As compared with the previous Show at Aberdeen in 1928, entries of Cattle, Sheep, and Pigs all showed increases. Horses were slightly down in numbers, and also Poultry, while in the other sections the numbers of exhibits were well maintained. There was a large display of Implements, Machinery, and general exhibits, the total space taken being considerably in excess of that occupied at the Show of 1928.

Full-dress Musical Rides and Trick Riding Displays by the Royal Scots Greys, and Sheep Dog Demonstrations, were again provided on the Wednesday evening, Thursday afternoon and evening, and Friday afternoon. These, together with the usual Jumping Competitions, were a source of much enjoyment to the many visitors to the Show.

On the whole, the weather during the Show was favourable. Unfortunately, rain fell on the Thursday morning, and this somewhat affected the attendance on that day. The total number of visitors who paid for admission during the four

days was 77,550. This compared with 75,501 at Aberdeen in 1928, and 79,113 at Glasgow in 1934.

Under all the circumstances, the Directors are gratified to be able to report that the Accounts of the Show show a credit balance of £645.

### STATISTICS.

The following tables give the number of entries in the various sections :—

#### CATTLE.

	SHORTHORN.	No. of Entries
1. Aged bulls . . . . .		7
2. Two-year-old bulls . . . . .		1
3. Two-year-old bulls . . . . .		1
4. One-year-old bulls . . . . .		13
5. One-year-old bulls . . . . .		11
6. Cows in milk, born before 1st December 1930		7
Extra stock . . . . .		1
7. Three-year-old cows . . . . .		6
8. Two-year-old cows or heifers . . . . .		6
9. One-year-old heifers . . . . .		19
10. One-year-old heifers . . . . .		7
		— 79

#### ABERDEEN-ANGUS.

11. Aged bulls . . . . .	9
Extra Stock . . . . .	1
12. Two-year-old bulls . . . . .	7
13. One-year-old bulls . . . . .	12
14. One-year-old bulls . . . . .	11
15. Cows in milk, born before 1st December 1931	10
16. Three-year-old cows . . . . .	7
17. Two-year-old cows or heifers . . . . .	10
18. One-year-old heifers . . . . .	19
19. One-year-old heifers . . . . .	10
	— 96

#### GALLOWAY.

20. Aged bulls . . . . .	4
21. Two-year-old bulls . . . . .	5
22. One-year-old bulls . . . . .	
23. Cows in milk, born before 1st December 1932	
Extra Stock . . . . .	1
24. Two-year-old cows or heifers . . . . .	13
25. One-year-old heifers . . . . .	11
	— 48

#### BELTED GALLOWAY.

26. Bulls born before 1st December 1933 . . . . .	
Extra Stock . . . . .	
27. Bulls born on or after 1st December 1933 . . . . .	
28. Cows or heifers, born before 1st December 1932, in milk or in calf . . . . .	
29. Heifers born on or after 1st December 1932 and before 1st December 1933 . . . . .	
30. Heifers born on or after 1st December 1933 . . . . .	

## HIGHLAND.

31. Aged bulls . . . . .	
32. Two-year-old bulls . . . . .	4
33. One-year-old bulls . . . . .	5
34. Cows of any age, with calf at foot	8
Extra Stock . . . . .	1
35. Three-year-old heifers . . . . .	5
36. Two-year-old heifers . . . . .	9
37. One-year-old heifers . . . . .	10
	<hr/> 42

## AYRSHIRE.

38. Cows in milk, born before 1932 . . . . .	10
39. Cows in milk, born on or after 1st January 1932 . . . . .	12
40. Cows of any age, in calf . . . . .	8
41. Heifers born on or after 1st June 1932, in calf . . . . .	18
42. Heifers born in 1933 . . . . .	9
43. Heifers born in 1934 . . . . .	10
44. Bulls born before 1933 . . . . .	
45. Bulls born in 1933 . . . . .	
46. Bulls born in 1934 . . . . .	7
	<hr/> 84

## BRITISH FRIESIAN.

47. Cows in milk, born in or before 1931 . . . . .	6
48. Cows in calf and not in milk, born in or before 1931 . . . . .	10
49. Cows in milk, born in 1932 or 1933 . . . . .	7
50. Heifers born in 1933 . . . . .	8
51. Heifers born in 1934, before 1st July . . . . .	11
52. Heifers born in 1934, on or after 1st July . . . . .	9
53. Bulls born in or before 1932 . . . . .	4
Extra Stock . . . . .	1
4. Bulls born in 1933 . . . . .	6
5. Bulls born in 1934 . . . . .	6

## FAT CATTLE.

56. Bullock, any pure breed or cross, born on or after 1st December 1932 and before 1st December 1933 . . . . .	3
57. Bullock, any pure breed or cross, born on or after 1st December 1933 . . . . .	6
58. Heifer, any pure breed or cross, born on or after 1st December 1932 and before 1st December 1933 . . . . .	4
59. Heifer, any pure breed or cross, born on or after 1st December 1933 . . . . .	5
	<hr/> 18
	<hr/> 464

## HORSES.

## CLYDESDALE STALLIONS AND COLTS.

60. Aged stallions . . . . .	4
61. Three-year-old entire colts . . . . .	12
62. Two-year-old entire colts . . . . .	12
63. One-year-old entire colts . . . . .	20
	<hr/> 48

## CLYDESDALE GELDINGS.

64. Aged geldings . . . . .	5
65. Three-year-old geldings . . . . .	6
66. Two-year-old geldings . . . . .	6
67. One-year-old geldings . . . . .	4
	<hr/> 21



## CLYDESDALE MARES AND FILLIES.

63. Mares of any age, with foal at foot, or due to foal before 31st July 1935 . . . . .	5
Extra Stock . . . . .	1
69. Yeld mares, born before 1932 . . . . .	2
70. Three-year-old yeld mares or fillies . . . . .	10
71. Two-year-old fillies . . . . .	15
72. One-year-old fillies . . . . .	15
	— 48

## HUNTERS.

73. Hunter brood mares, with foal at foot, or due to foal before 31st July 1935 . . . . .	5
74. Yeld mares, fillies, or geldings, born in 1932, in hand . . . . .	6
75. Yeld mares, fillies, or geldings, born in 1933, in hand . . . . .	5
76. Fillies, colts, or geldings, born in 1934, in hand . . . . .	4
77. Mare or gelding, born before 1931, to carry 14 stone and over, in saddle . . . . .	7
78. Mare or gelding, born before 1931, to carry 12 stone 7 lb. and under 14 stone, in saddle . . . . .	6
79. Hack of hunter type, born in or before 1931, over 14.2 hands and not exceeding 15.2 hands, in saddle . . . . .	4
	— 37

## HIGHLAND PONIES AND WESTERN ISLAND PONIES.

80. Stallion, born before 1933, not exceeding 14.2 hands . . . . .	3
81. Entire colt, born on or after 1st January 1933, not exceeding 14.2 hands . . . . .	5
82. Mare, any age, not exceeding 14.2 hands, with foal at foot, or due to foal before 31st July 1935 . . . . .	3
Extra Stock . . . . .	1
83. Yeld mare or filly, born before 1933, not exceeding 14.2 hands . . . . .	4
84. Filly, born on or after 1st January 1933, not exceeding 14.2 hands . . . . .	4
85. Gelding, born before 1933, not exceeding 14.2 hands . . . . .	1
	— 21

## SHETLAND PONIES.

86. Stallions, not exceeding 10½ hands, born before 1932 . . . . .	5
87. Entire colts, not exceeding 10½ hands, born in 1932 or 1933 . . . . .	5
88. Mares, not exceeding 10½ hands, with foal at foot, or due to foal before 31st July 1935 . . . . .	5
89. Yeld mares, not exceeding 10½ hands . . . . .	7
90. Fillies, not exceeding 10½ hands, born in 1932 or 1933 . . . . .	4
	— 26

## SADDLE CLASSES.

91. Mares or geldings, any age, over 13 hands and not exceeding 14.2 hands, in saddle . . . . .	5
92. Mares or geldings, any age, not exceeding 13 hands, in saddle . . . . .	5
	— 10

## HACKNEYS IN HARNESS.

93. } Canceled owing to insufficient entries—(Regulation 12).	
94. }	
95. }	

## HORSES IN HARNESS.

96. Draught gelding, any age, in harness, shown in cart or lorry (and driven by single driver) . . . . .	7
97. Horse, any age, in harness, shown in van or light lorry . . . . .	12
	— 19



## FAT SHEEP.

131. Three fat lambs, any breed or cross, dropped in the year of the Show	6
CORRIEDALE SHEEP. (Exhibition only)	7

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386

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## GOATS.

132. Female goats, Toggenburg, British Toggenburg, or British Alpine, in milk	2
133. Female goats, Saanen, or British Saanen, in milk	2
134. Female goats, any other variety, in milk	5
135. Goatlings, Toggenburg, British Toggenburg, or British Alpine, over one but not exceeding two years	3
136. Goatlings, any other variety, over one but not exceeding two years	3
137. Female kids, any variety, not exceeding one year	5
138. Male kids, any variety, not exceeding one year	...
	— 20

## MILKING COMPETITIONS.

139. For quality, open to Classes 132 to 134 (6 entries)	...
140. For quantity, open to Classes 132 to 134 (6 entries)	...
	— ...
	20

## PIGS.

## LARGE WHITE.

141. Boars born before 1934	9
Extra Stock	1
142. Boars born in 1934 before 1st July	12
143. Boars born in 1934 on or after 1st July	8
144. Boars born in 1935	15
145. Sows born before 1934	12
146. Sows born in 1934 before 1st July	17
147. Sows born in 1934 on or after 1st July	15
148. Sows born in 1935	18
	— 107

## LARGE BLACK.

149. Boars born before 1935	5
150. Boars born in 1935	5
151. Sows born before 1934	7
152. Sows born in 1934	6
153. Sows born in 1935	8
	— 31

BACON PIG COMPETITION	138
	92
	— 230

## POULTRY.

1-123.	500
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## DAIRY PRODUCE.

1-4.	33
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## EGGS.

1-5.	68
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## HONEY, &amp;c.

1-21.	124
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## RURAL INDUSTRIES.

1-26.	380
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## BUTTERMAKING.

Class 1 (open), 49 ; class 2 (novice), 38	87
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## HORSE-SHOE MAKING

1	49
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## HORSE-SHOEING.

Class 1 (open), 52 ; class 2 (juniors), 12	64
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## LIVE STOCK JUDGING.

Open to persons not exceeding 23 years of age	148
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## SUMMARY.

1. Cattle	464
2. Horses	230
3. Jumping	90
4. Sheep	386
5. Goats	20
6. Pigs	138
7. Bacon Pigs	92
8. Poultry	500
9. Dairy Produce	53
10. Eggs	68
11. Honey, &c.	124
12. Rural Industries	380
13. Buttermaking	87
14. Horse-Shoe Making	49
15. Horse-Shoeing	64
16. Live Stock Judging	148
	2873

The following table gives a comparative view of the entries of cattle, horses, sheep, goats, pigs, poultry, eggs, honey, dairy produce, wool, rural industries, &c., and implements, of the value of the premiums offered, and of the receipts at the entrance-gates, grand stands, and for catalogues, &c., at the Shows which have been held in the Aberdeen Show Division :—

Year.	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Eggs.	Honey, &c.	Dairy Produce.	Wool.	Rural Industries.	Horse-Shoeing.	Live Stock Judging.	Butter-making.	Implements.	Premiums.	Drawings at Show.
1834	188	77	77	..	44	..	..	..	28	..	..	..	..	..	9	£627	£387
1840	269	80	51	..	40	..	..	..	48	..	..	..	..	..	80	781	588
1847	361	105	92	..	24	42	..	..	42	..	..	..	..	..	49	920	510
1858	450	189	281	..	47	122	..	..	..	..	..	..	..	..	802	1500	1,239
1868	378	189	260	..	39	160	..	..	..	..	..	..	..	..	1158	1600	1,577
1876	424	227	231	..	58	374	..	..	..	..	..	..	..	..	1812	2440	2,899
1885	355	229	231	..	7	252	..	..	40	..	..	..	..	..	1849	2368	3,436
1894	314	321	184	..	31	365	..	..	56	..	..	34	..	..	2732	2440	5,121
1902	350	253	248	..	42	475	..	..	48	10	..	..	..	..	1998	2796	4,413
1908	331	299	287	..	42	509	..	..	54	..	..	..	..	..	1931	3045	4,595
1920	340	250	279	19	112	597	..	61	43	88	..	..	..	..	2065	4608	14,120
1928	421	277	349	25	80	578	..	167	54	53	352	75	106	..	2377	6131	11,031
1935	464	230	386	20	230	500	38	124	38	..	380	113	149	87	2778	6040	11,372

## A COMPARISON.

The following figures relating to some of the most successful Shows the Society has held will be perused with interest :—

	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Rabbits.	Total Live Stock.	Implements.	Premiums.	Drawings at Show.	Profit.
Glasgow, 1867 . . .	238	212	257	..	53	150	..	983	1344	£1600	£3,005	£1307
Edinburgh, 1869 . . .	310	212	340	..	22	239	..	1123	1900	1600	4,078	2087
Glasgow, 1875 . . .	411	405	296	..	43	479	..	1639	2220	2665	6,231	3316
Edinburgh, 1877 . . .	329	342	305	..	30	234	..	1250	2292	2714	6,734	3710
Edinburgh, 1884 . . .	580	453	493	..	35	253	..	1814	2282	4343	6,548	1855
Edinburgh, 1893 . . .	850	349	294	..	31	360	..	1411	2269	2600	4,918	2323
Aberdeen, 1894 . . .	314	324	184	..	34	365	..	1221	2532	2440	5,121	1678
Perth, 1896 . . .	292	258	204	..	20	374	..	1148	1945	2205	4,788	2511
Glasgow, 1897 . . .	317	350	245	..	30	275	..	1217	2227	2397	4,392	2021
Edinburgh, 1899 . . .	346	513	477	..	48	551	..	1978	2535	3844	10,285	3911
Stirling, 1900 . . .	321	288	369	..	28	457	..	1463	2095	2915	4,305	1078
Inverness, 1901 . . .	360	257	204	..	22	499	..	1340	1460	2306	2,485	99
Aberdeen, 1902 . . .	330	253	243	..	42	475	..	1343	1968	2796	4,413	1604
Perth, 1904 . . .	348	315	283	..	35	413	..	1394	1972	3058	4,998	1823
Glasgow, 1905 . . .	310	462	234	..	60	534	..	1750	1875	3702	4,473	1203
Peables, 1906 . . .	253	258	291	..	40	438	..	1230	1658	3072	2,596	416
Edinburgh, 1907 . . .	363	464	352	..	58	605	..	1842	2110	3614	7,061	2309
Aberdeen, 1908 . . .	331	299	237	..	42	509	..	1413	1931	3045	4,596	1831
Stirling, 1909 . . .	330	355	249	..	54	539	..	1527	1977	3017	4,638	1100
Dumfries, 1910 . . .	270	355	295	..	54	481	..	1455	1950	3057	3,411	562
Paisley, 1913 . . .	408	472	334	..	48	536	..	1798	1968	5109	6,468	2527
Edinburgh, 1919 . . .	215	301	221	60	43	398	..	1238	1605	4517	17,377	3275
Aberdeen, 1920 . . .	340	250	279	19	112	597	..	1597	2065	4608	14,120	1679
Stirling, 1921 . . .	367	279	299	59	188	582	..	1774	2201	5055	12,822	2350
Dumfries, 1922 . . .	423	272	339	41	229	568	..	1891	2156	5438	11,428	1090
Perth, 1924 . . .	406	283	366	21	202	760	..	2033	2382	5712	10,758	2311
Glasgow, 1925 . . .	461	340	349	31	178	577	178	2114	2570	6136	12,865	4226
Kelso, 1926 . . .	430	284	597	31	159	546	108	2155	2366	6004	9,218	324
Edinburgh, 1927 . . .	462	357	493	63	201	724	184	2434	2374	6019	12,315	2090
Aberdeen, 1928 . . .	421	277	349	25	80	578	120	1850	2377	6131	11,031	1832
Edinburgh, 1931 . . .	635	389	634	47	117	644	125	2641	2991	9608	12,478	704
Dundee, 1933 . . .	143	256	396	22	75	491	89	1772	2471	6979	12,698	4813
Glasgow, 1934 . . .	507	287	356	27	155	532	85	1949	2392	7034	13,535	3534
Aberdeen, 1935 . . .	464	230	386	20	230	500	..	1830	2778	6940	11,372	645

## CATTLE.

There was a good entry of Cattle, the total of 464 showing an increase of 43 over that of the previous Show held in Aberdeen in 1928.

Shorthorn entries numbered 79, out of which 50 were in the classes for yearling bulls and yearling heifers. Mr Albert James Marshall, Bridgebank, Stranraer, added to his many successes of recent years by again securing the Championship, the winning animal on this occasion being last year's Reserve Champion, "Cruggleton Beverley," 256,591 (Fig. 40). This exceptionally well-developed, home-bred, three-year-old, dark roan bull, got by "Cruggleton Colonel," 236,411, out of "Brenda Blythesome," 120,952, was also awarded the Fife and Kinross Perpetual Gold Challenge Cup, the Duthie Perpetual Challenge Cup, the

Tweeddale Gold Medal, and the Shorthorn Society's Special Prize of £20 for best bull. Mr Duncan M. Stewart, Millhills, Crief, was the exhibitor of the Reserve Champion animal, "Anticur Wonder," 268,015, an outstanding, sixteen-months-old roan bull, bred by Mr John Wallace, Anticur, Dunloy, Belfast. The Emilio R. Casares, Jun., Junior Memorial Champion Cup was awarded to Mr Peter Forbes Jones, Dunmore Park, Dunmore, for "Cruggleton Reservist," 269,670, a yearling bull bred by Mr Albert James Marshall. Mr Charles A. Linzee-Gordon of Cluny, Cluny Castle, Sauchen, repeated his success of the previous year by again winning the Shorthorn Society's Special Prize of £20 for best female animal with the five-year-old, dark roan cow, "Cluny Augusta 29th," 126,703, entered as 'Extra Stock.' Mr Duncan M. Stewart, with "Anticur Wonder" and two female animals, secured the Silver Cup given by Mr W. M'Nair Snadden for best group of Shorthorns.

The outstanding feature of the Cattle Section was the excellent display of Aberdeen-Angus Cattle, and it is worthy of note that, out of a strong entry of 96, only three animals were absent from the Show. For the second year in succession the Champion animal was found in "Julie Erica," 100,145 (Fig. 41). This three-year-old cow, shown in perfect condition, was sired by "Jubal Eric," 74,413, her dam being "Julla Erica," 87,335. In addition to the President's Champion Medal, she secured for her owner and breeder, Mr J. E. Kerr of Harviestoun, Dollar, the Paisley Perpetual Gold Challenge Cup, the Aberdeen-Angus Cattle Society's Champion Gold Medal, the Ballindalloch Challenge Cup for best cow, and the Falconer L. Wallace Silver Cup for best female. The Reserve Champion was "Pelorus of Bywell," 78,476, a grand four-and-a-half-year-old bull, shown as 'Extra Stock' and exhibited and bred by Viscount Allendale, Bywell, Stocksfield-on-Tyne. Viscount Allendale also won the Ballindalloch Challenge Cup for males and the Silver Challenge Cup given by Senor Eduardo Estanguet, Argentina, with "Jellaba Eric," 84,640, a fine promising, two-year-old bull, bred by Mr J. E. Kerr of Harviestoun. Mr J. E. Kerr, with "Julie Erica" and two other animals bred by himself, won outright the Silver Cup given by Mr W. Gilchrist Macbeth, Dunira, Comrie, and with the same three animals was also successful in securing the Special Jubilee Gold Medal presented by the Aberdeen-Angus Cattle Society to mark the Silver Jubilee of the accession to the Throne of his late Majesty, King George V.

Although far from the home of the breed, there was a representative entry of Galloways, especially in the two classes provided for heifers. As at Glasgow Show in 1934, Mr Arthur B. Duncan, Gilchristland, Closeburn, Dumfries,

was again awarded the President's Champion Medal and the Dr Gilliespie Memorial Challenge Trophy, the winning animal being the eight-year-old cow "Wells Ruby Princess 5th," 31,772 (Fig. 42). A worthy champion, she was bred by Mr John Scott, Brow Wells, Ruthwell, Carlisle, her sire being "Yardstick of Auchengassel," 14,774, and dam "Drum-humphry Ruby Princess 2nd," 29,352. The runner-up for Championship honours was "Nazetta 3rd of Castle Milk," 30,930, a handsome, home-bred, nine-year-old cow, entered by Sir John William Buchanan-Jardine of Castle Milk, Bart., Castle Milk, Lockerbie. Mr Arthur B. Duncan was also awarded the Galloway Cattle Society's Silver Challenge Cup for his First Prize three-year-old bull, "John S. T. of Blair," 18,512, bred by Mr John Black, Blair, Maybole.

Belted Galloways were rather disappointing in numbers, though no fault could be found with the quality of the animals forward. All the chief honours in this section went to Mr J. Faed Sproat, Boreland of Anwoth, Gatehouse, Galloway, who not only secured the President's Champion Medal, the Knockbrex Challenge Cup, and the Silver Cup presented by General Sir Ian Hamilton, but was also the exhibitor of the Reserve Champion. The Champion animal was "Mochrum Cissie of Craigeach," 3014 B. (Fig. 43), a beautiful four-year-old-cow, bred by the Marquis of Bute, K.T., Craigeach, Kirkcowan. Her sire was "Mark Grant," 655 B., and dam "Mochrum Luxury of Craigeach," 1430 B. The Reserve Champion was the well-known aged bull, "Gartmore Charles," 701 B., bred by Sir Arthur Cayzer, Bart., Gartmore, Stirling.

The entry of Highland Cattle was not large, but the high standard of quality set up in recent years was fully maintained. Mr John G. Morrison of Islay, Islay House, Bridgend, Islay, won the President's Champion Medal and the Breed Society's Perpetual Victory Challenge Cup for best male animal with "Fear Tagraidh Ile," 3823 (Fig. 44). An exceptionally fine yearling red bull, he was bred by exhibitor and was got by "Culnadalloch II. of Achnacloich," 3441, out of "Lady Smith VI. of Stronvar," 10,678. The animal next in order of merit, and winner of the Breed Society's Perpetual Victory Challenge Cup for best female, was "Baravalla Smiorail II. of Killundine," 10,636, a two-year-old, red heifer shown and bred by Mrs Lees-Milne of Killundine, Drimnin, Oban.

The fact that Ayrshires are rapidly increasing in numbers throughout the country was borne out by the gratifying total of 84 entries, compared with 41 at the previous Show held in Aberdeen in 1928. After keen competition, "Dunrod Susan 3rd," 36,868 (Fig. 45), a four-year-old white cow, of great quality, gained for Mr John Clark, Dunrod Farm, Inverkip, the President's Champion Medal, the Edinburgh Perpetual

Gold Challenge Cup, the Cowhill Champion Cup, and the Ayrshire Cattle Society's Special Prize of £10 for best female animal. Bred by exhibitor, she was sired by "Dunrod Sir Jacob," 27,973, her dam being "Dunrod Susan," 9424. In addition to the above awards, it is noteworthy that "Dunrod Susan 3rd" also secured first place in the separate class provided for Cows from Grade A. (T.T.) or Certified Herds. The runner-up for Championship honours and winner of the Ayrshire Cattle Society's Special Prize of £10 for best bull was "Lessnessock Humanity," 32,263, a three-year-old brown bull, bred by Mr A. W. Montgomerie, Westburn Farm, Cambuslang, and owned by Mr R. M. Reid, The Glen Farm, Falkirk.

There was a satisfactory entry of British Friesians, and the all-round quality of the exhibits was very gratifying. Mr James Kilpatrick, Craigie Mains, Kilmarnock, was the exhibitor and breeder of the Champion animal "Craigiemains Ideal," 34,053 (Fig. 46). Besides the President's Champion Medal, this well-balanced, massive, seven-year-old bull, sired by "Downside Idol," 30,895, out of "Craigiemains Belle 2nd," 69,936 P.L., won the MacRobert Silver Challenge Bell and the Breed Society's Special Prize of £5 for best bull. The Breed Society's Special Prize of £5 for best female went to the Reserve Champion, "Cart Kiola," 154,384, a home-bred, four-year-old cow, of fine quality, shown by Mr John Craig, Green Farm, Linwood, Paisley. The British Friesian Cattle Society's Silver Challenge Cup, offered for best group of three animals, was awarded to Mr Albert Weightman, Middle Herrington Farm, Sunderland.

Contrary to expectations, Fat Cattle were not numerous, the four classes attracting a total of only 18 entries. "Ernie of Dunira," 87,371 (Fig. 47), a two-year-old Aberdeen-Angus bullock, secured the President's Champion Medal. He was entered and bred by Mr W. Gilchrist Macbeth, Dunira, Comrie, his sire being "Gratuitous," 64,618, and dam "Erminever 3rd of Dunira," 97,189. A close runner-up to the Champion was a three-year-old, home-bred, Galloway heifer, "Girl Guide 2nd," 35,799, belonging to Mr Francis N. M. Gourlay, Kirkland, Tynron, Dumfriesshire.

#### HORSES.

Horses showed a further decrease in numbers, being 57 less than at Glasgow in 1934.

The three sections provided for Clydesdales were moderately represented with entries. Though there appeared to be more absentees at the Show than usual, no fault could be found with the quality of the horses present. The classes for



stallions and colts brought forward an entry of 48. With only three animals before the judges, the class for aged stallions was disappointing. Mr James Kilpatrick, Craigie Mains, Kilmarnock, registered another outstanding success by securing the President's Champion Medal, the Renfrewshire Perpetual Gold Challenge Cup, and winning outright the Cawdor Challenge Cup for males, with "Craigie Magnificent" (Fig. 48). A splendid, yearling, brown colt, his sire was "Craigie Beau Ideal," 21,856, and dam "Rue May Queen," 57,974. He was bred by Mr Robert Dalziel, Rue, Auldgirth, Dumfries, who was accordingly awarded the William Taylor Memorial Prize of £10 and Certificate, offered to the breeder of the best colt in the two-year-old and yearling classes. The animal placed next in order of merit was "His Majesty," 22,481, a strong two-year-old colt, bred and exhibited by Mr David Adams, Auchencraig, Dumbarton.

Clydesdale Geldings, though short in numbers, gave a most impressive display. Mr William Young, West Preston, Preston Mill, Dumfries, carried off the chief honours in this section. He not only gained the First Prize in three of the four classes, but was also the exhibitor of both the Champion and Reserve Champion animals. The winner of the President's Champion Medal and the Meiklem Gold Challenge Cup was "Preston Willie" (Fig. 49), a four-year-old bay gelding, of great substance. Bred by Mr John L. Prudham, Whitefield, Heads Nook, Carlisle, his sire was "Kelsick Refiner," 21,648, and dam "Vonnice," 55,138. The Reserve was "Preston Jamie," a three-year-old black gelding, bred by Mr William M'Culloch, Highmye, Stoneykirk, Stranraer.

As at the Show in the previous year, the classes for two-year-old and yearling fillies secured the majority of the entries in the female section for Clydesdales, out of a total entry of 48. The President's Champion Medal and the Cawdor Challenge Cup for females went to a mare exhibited as 'Extra Stock,' the noted "Powerful Link," 58,789 (Fig. 50). Nine years old, and shown in great condition by her owner, Mr David Adams, Auchencraig, Dumbarton, she was bred by Mr James Durno, Rothiebrishbane, Rothienorman, her sire being the famous "Benefactor," 20,867, and dam "Evening Tide," 52,150. The Reserve to the Champion was "Lucinda," a sweet moving, three-year-old filly, bred by and the property of Mr George M'Dowall, Briarbank, Stranraer.

The entry of Hunters, both in regard to numbers and quality, was quite satisfactory. The Supreme Champion and winner of the Dumfriesshire Centenary Silver Challenge Cup was "Take Time" (Fig. 51), a grand, seven-year-old, bay gelding, belonging to Mr Donald Cross, Knockdon, Maybole. Sir John William Buchanan-Jardine of Castle Milk, Bart., Castle Milk, Lockerbie, was the exhibitor of the Reserve

Champion animal. This was "Hasty Bob," 1694, a promising three-year-old gelding of his own breeding. The winner of the Hunters' Improvement, &c., Society's Champion Gold Medal for best filly was again awarded to the previous year's winner, the two-year-old brown filly, "Speedway," 8203, bred and exhibited by Captain J. Steel, Kirkwood, Lockerbie.

Numerically, the entry of Highland and Western Island Ponies was much less than that expected at a Show held in Aberdeen. Miss Kathleen Mackenzie, Glen Kyllachy, Tomatin, Inverness-shire, not only won the President's Champion Medal and the Highland Pony Society's Special Prize of £8 for best female, but also became the first winner of the Kinmonth Perpetual Gold Challenge Quaich, given by Mrs Moncrieff Wright, Kinmonth, Bridge of Earn, in memory of her husband the late Mr J. Moncrieff Wright, a noted breeder and exhibitor of Highland and Western Island Ponies. The winning pony was a beautiful, home-bred five-year-old, grey dun mare, "Strianach of Farr," 6069 (Fig. 52), got by "Faillie Rover," 1142, out of "Starlight VII.," 3966. The Highland Pony Society's Special Prize of £8 for best male and the National Pony Society's prize of £5 for best stallion were awarded to the runner-up for Championship honours, "Creag Liath," 1821, a stylish three-year-old, grey stallion, entered and bred by Mr W. Gilchrist Macbeth, Dunira, Comrie. Miss E. O. Sharp, Balmuir, Dundee, with the one-year-old "Alt-an-Buidhe of Dalnaglar," secured the National Pony Society's prize of £5 for best colt.

Shetland Ponies were also few in numbers, but there were many excellent specimens of the breed on view. Mr J. E. Kerr of Harviestoun, Dollar, scored another notable victory by securing the Championship with "Harviestoun Pixie" (Fig. 53), an attractive, three-year-old, black filly. Home-bred, she was sired by "Dunsmuir," 1155, her dam being "Harviestoun Pryde," 4544. It is pleasing to record that a local exhibitor, Mr Alexander Davidson, Mundurno, Bridge of Don, Aberdeen, was successful in being awarded the Reserve Championship with "Birk of Manar," 1301, a four-year-old, black stallion, bred by Miss H. M. Duguid, Manar, Inverurie. Mr Davidson also won the Breed Society's Silver Medal for best animal of the sex opposite to that of the winner of the President's Champion Medal, and the Special Prize of £10 for best group consisting of one male and two females.

As was expected, there were very few Riding Ponies, and owing to insufficient entries the Section for Hackneys in Harness was cancelled.

Classes were again included in the Prize List for Draught Geldings in Harness, and Horses in Harness shown in Van or Light Lorry. The entries were judged on the Friday, the winning animals being paraded on the afternoon of that day.

Horses entered for the Jumping Competition, though not so numerous as at the Society's Shows in the south, gave a good exhibition and were a source of great interest in the Parade Ring.

### SHEEP, PIGS, &C.

Sheep showed an increase in numbers, each breed, with the exception of Half-Breds and Dorset Horns, being well supported with entries. For the first time in the history of the Society, there was on view an exhibit of Corriedale Sheep. There were 20 Goats, the lowest entry recorded since 1920. Including Bacon Pigs, there was an extremely good entry of 230 Pigs. Mr John E. B. Cowper, Gogar House, Edinburgh, for the third year in succession, won the Dundee Citizens' Perpetual Silver Challenge Cup for best Large White Pig. The winners of the President's Champion Medals for Sheep, Goats, and Pigs are shown in Figs. 54 to 64.

Satisfactory entries were received in the classes for Poultry, Eggs, Dairy Produce, Honey, and Rural Industries, and many outstanding exhibits were to be seen in each of the various sections.

One of the most pleasing features of the Show was that provided by the exhibits on the Horticultural stands. Instituted at the Hundredth Show in 1931, the popularity of this Section has far exceeded earlier expectations.

Horse-Shoeing and Shoe-Making Competitions were again held on the Wednesday, Thursday, and Friday. On account of the Show being held so far north, the number of competitors was less than usual. No fault, however, could be found with the work of those who took part in the competitions.

The Live Stock Judging Competition was carried out on the second day of the Show. 148 entries were received, which compared favourably with the record total of 171 at Glasgow in the previous year.

Great interest was shown by the general public in the Butter-making Competitions which were held throughout the four days of the Show.



Fig 40.—SHORTHORN BULL, "CRUGGLETON BEVFRLEY" 256,591

Winner of President's Medal for best Shorthorn animal, Aberdeen Show, 1935 Bred by and the property of Mr Albert James Marshall, Budgebank, Stranraer Age two years and ten months



Fig. 41 —ABERDEEN ANGUS COW, "JULIE ERICA" 100,145.

Winner of President's Medal for best Aberdeen Angus animal, Aberdeen Show, 1935 Bred by and the property of Mr J E Kerr of Harviestoun, Dollar Age three years and three months

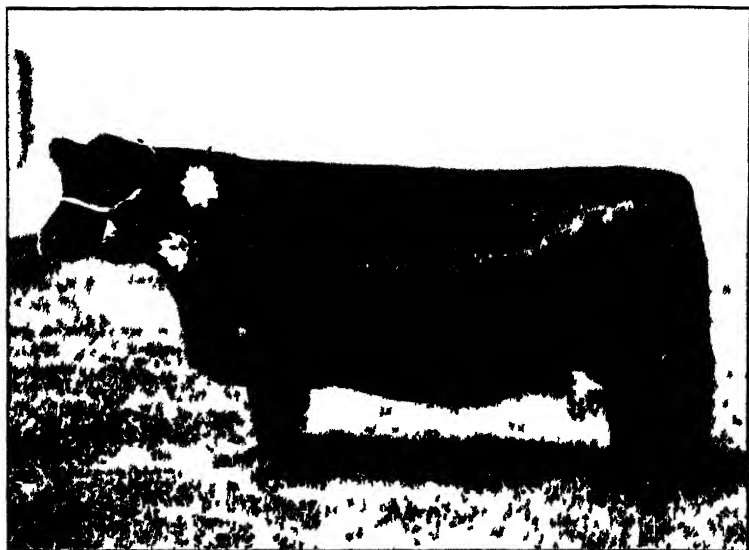


Fig 42 —GALLOWAY COW, "WELLS RUBY PRINCESS 5TH" 81,772

Winner of President's Medal for best Galloway animal Aberdeen Show 1935 The property of Mr Arthur B Duncan Gilchristland Closeburn Bred by Mr John Scott, Brow Well, Ruthwell Carlisle Age eight years and four months



Fig 43 —BELTED GALLOWAY COW, "MOCHRUM CISSIE OF CRAIGEACH" 9014B

Winner of President's Medal for best Belted Galloway animal Aberdeen Show 1935 The property of Mr J Fied sprout Boreland of Anwoth, Gathouse Bred by The Marquis of Bute & T Craigeach, Kirlcowan Age four years and three months



Fig 44 —HIGHLAND BULL, "FEAR TAGRAIDE ILE" 3823

Winner of President's Medal for best Highland animal Aberdeen Show 1930. Bred by and the property of Mr John G Morrison of Islay, Islay House, Bridgend Islay. Age one year and four months



Fig 45 —AYRSHIRE COW, "DUNROD SUSAN 3RD" 36,868

Winner of President's Medal for best Ayrshire animal Aberdeen Show, 1930. Bred by and the property of Mr John Clark, Dunrod Farm, Inverkip. Age four years and two months



Fig 46 —BRITISH FRIESIAN BULL, "CRAIGMAINS IDEAL" 84088

Winner of President's Medal for best British Friesian animal Aberdeen Show 1935. Bred by and the property of Mr James Kilpatrick Craigmains Kilmarinock. Age six years and eleven months.



Fig 47 —ABERDEEN-ANGUS BULLOCK, 'ERNIE OF DUNIRA' 87,371

Winner of President's Medal for best Fat animal Aberdeen Show 1935. Bred by and the property of Mr W Gilchrist Macbeth of Dunira, Comrie. Age one year and seven months.

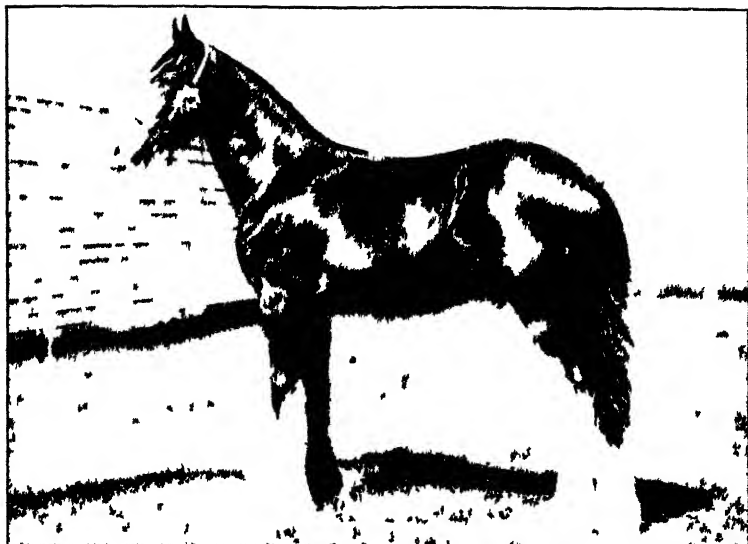


Fig 48 —CLYDESDALE COLT, "CRAIKIE MAGNIFICENT"

Winner of President's Medal for best Clydesdale Stallion or Colt Aberdeen Show 1935 The property of Mr James Kilpatrick, Craikie Mills Kilmarnock Bred by Mr Robert Dalziel Ruth Auld, until Age one year and two months



Fig 49 —CLYDESDALE GELDING, 'PAFSTON WILLIE'

Winner of President's Medal for best Clydesdale Gelding Aberdeen Show 1935 The property of Mr William Young, West Preston Mill Dumfries Bred by Mr John L Prudham Whitehead Herd's Nool Carlisle Age four years and one month



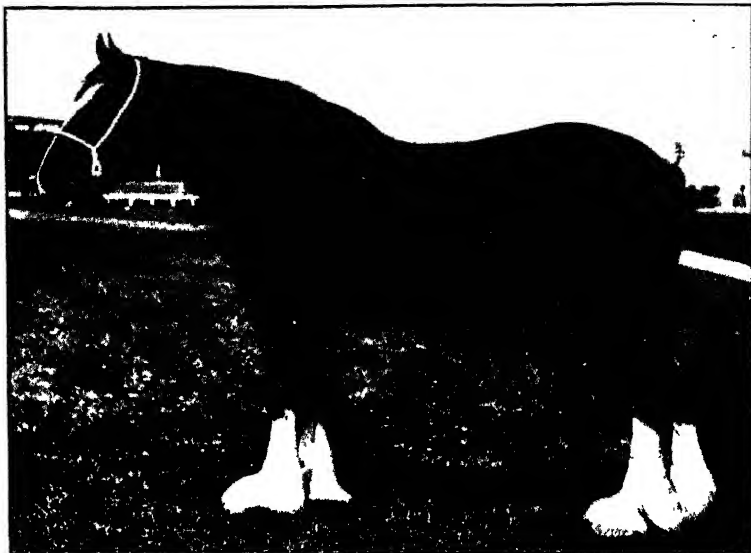


Fig. 50.—CLYDESDALE MARE, "POWERFUL LINK" 58,789.

Winner of President's Medal for best Clydesdale Mare or Filly, Aberdeen Show, 1935. The property of Mr David Adams, Auchencraig, Dumbarton. Bred by Mr James Durno, Rothiebrisdane, Rothiemoran. Age nine years.



Fig. 51.—HUNTER GELDING, "TAKE TIME."

Winner of President's Medal for best Hunter, Aberdeen Show, 1935. The property of Mr Donald Cross, Knockdon, Maybole. Age seven years.



Fig. 52.—HIGHLAND PONY MARE, "STRIANACH OF FARR" 6069.

Winner of President's Medal for best Highland or Western Island Pony, Aberdeen Show, 1935. Bred by and the property of Miss Kathleen Mackenzie, Glau Kyllachy, Tomatin. Age five years and one month.



Fig. 53.—SHETLAND PONY FILLY, "HARVIESTOUN PIXIE."

Winner of President's Medal for best Shetland Pony, Aberdeen Show, 1935. Bred by and the property of Mr J. E. Kerr of Harviestoun, Dollar. Age three years.



Fig. 54 —BLACKFACE TUP, "SENTINEL"

Winner of President's Medal for best Blackface Sheep, Aberdeen Show, 1935 The property of The Earl of Rothesay D.S.O. (Rosebery Estates), Moorfoot Farm Gorebridge Bred by Messrs Marshall & Mitchell Bleaton Blairgowrie Age three years



Fig 55 —CHEVIOT SHEARLING TUP

Winner of President's Medal for best Cheviot Sheep, Aberdeen Show, 1935 Bred by and the property of Mr Robert L Elliot, Chatto, Kelso



Fig. 56.—BORDER LEICESTER SHEARLING EWE.

Winner of President's Medal for best Border Leicester Sheep, Aberdeen Show, 1935. Bred by and the property of Mr John Young, Skerrington Mains, Hurlford.

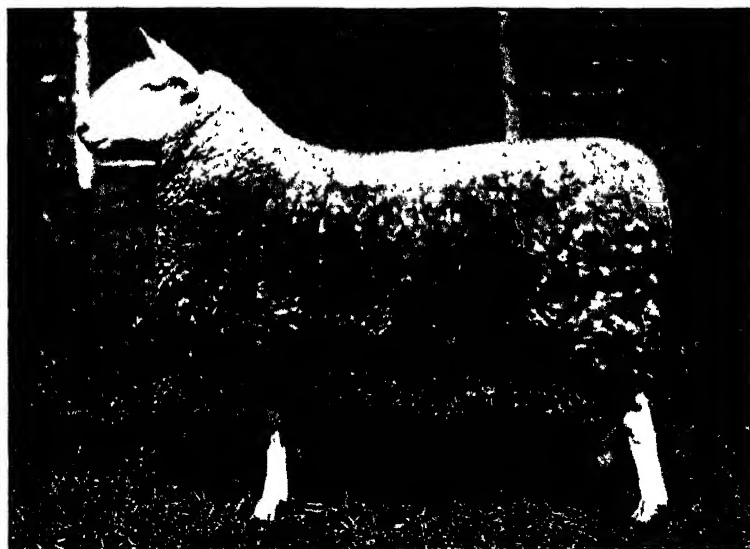


Fig. 57.—HALF-BRED SHEARLING EWE.

Winner of President's Medal for best Half-Bred Sheep, Aberdeen Show, 1935. Bred by and the property of Mr William Dodds, Clarlaw, Melrose.

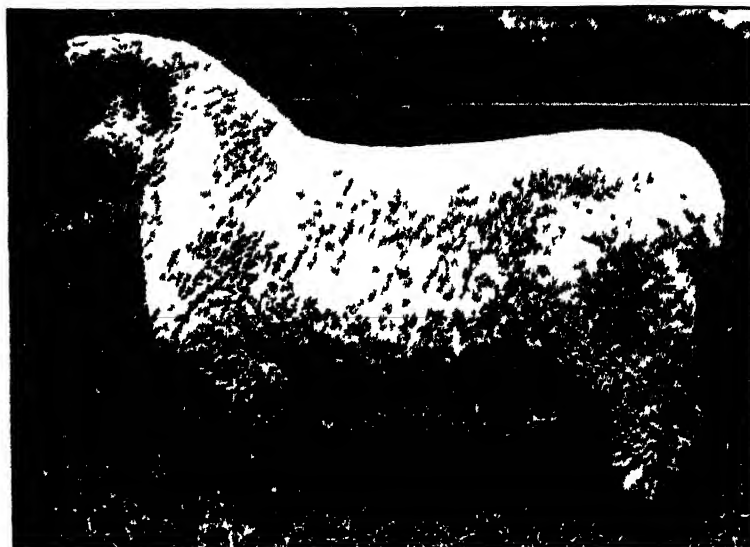


Fig 38 —OXFORD DOWN SHEARLING TUP

Winner of President's Medal for best Oxford Down Sheep, Aberdeen Show 1935 Bred by and the property of Messrs T & M Templeton Sandylow & Kelso

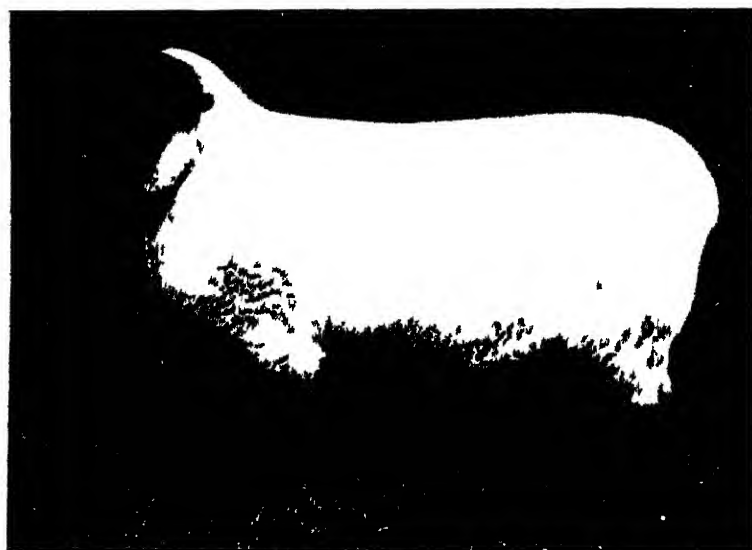


Fig 9 —SUFFOLK TUP "SKETCHWORTH TOPRICE"

Winner of President's Medal for best Suffolk Sheep Aberdeen Show 1935 The property of Messrs R & W Whetton East Neav Easie Bred by The Earl of Ellesmere Stetworth Park, Newmarket A, two-ten



Fig 60 —DORSET HORN EWE

Winner of President's Medal for best Dorset Horn Sheep, Aberdeen Show, 1930 Bred by and the property of The Earl of Elgin, K. T. O. M. G., Broomhall, Dunfermline Age one sheep



Fig 61.—THREE SURIOLA LAMBS

Winners of President's Medal for best Pen of Fat Sheep, Aberdeen Show, 1935 Bred by and the property of Messrs R & W Whitton, East Leven, Fife



Fig 62 —BRITISH GOAT, "COINISH SANSSOUCI Q\* " 9940. '

Winner of President's Medal for best animal in the Goat Classes, Aberdeen Show 1935. The property of Mrs T. L. o Paisley, Parkhurst, Park Road, Hurren, etc. Bred by Mrs Morcom, The Clock House, Brimsgrove. Age five years and five months.



Fig 63 —LARGE WHITE BOAR, "HALBERTH JAY 9TH ' 80,277

Winner of President's Medal for best Large White Pig, Aberdeen Show, 1935 The property of Mr John D B Cowper, Gogar Mains, Edinburg Bred by the late Captain A A Wallace, Halberth House, Halberth Dunfermline Age three years and four months



Fig 64 —LARGE BLACK SOW, "UPWOOD MODEL 1st" H 1284

Winner of President's Medal for best Large Black Pig Aberdeen Show, 1935 Bred by and the property of Mr E A Wuth Upwood Hill House Ramsey Huntingdon Age three years and ten months





## PREMIUMS AWARDED BY THE SOCIETY IN 1935.

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### ABERDEEN SHOW.

*18th, 19th, 20th, and 21st June 1935.*

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ABBREVIATIONS —V, *Very Highly Commended*    H, *Highly Commended*  
C, *Commended*

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## CATTLE

### SHORTHORN.

#### *PRESIDENT'S CHAMPION MEDAL for best Shorthorn Animal*

No 5 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Beverley" (256,591)

*Reserve*—No 22 Stewart, Duncan M., Millhills, Crieff, "Anticur Wonder" (268,015)

Fife and Kinross Perpetual Gold Challenge Cup, value £200, for best *Shorthorn Animal "Extra Stock" eligible to compete*. This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar-Fife in 1912

No 5 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Beverley" (256,591)

*Reserve*—No 22 Stewart, Duncan M., Millhills, Crieff, "Anticur Wonder" (268,015)

The Duthie Perpetual Challenge Cup, value £150, for best *Animal in the Shorthorn Classes. "Extra Stock" eligible to compete*. This Cup was gifted by the late Mr William Duthie, Collynie

No 5 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Beverley" (256,591)

Silver Cup, value £50, for the best Group of three animals in the Shorthorn Classes, consisting of one Bull and two Females. "*Extra Stock*" eligible to compete. Given by Mr William M'Nair Snadden, The Coldoch, Blair Drummond, Stirling.

Nos. 22, 47, 69 Stewart, Duncan M., Millhills, Crieff.

*Best Shorthorn Bull in the Show, entered or eligible for entry in Coates's Herd-Book*—£20, given by the Shorthorn Society.

No. 5 Marshall, Albert James, Bridgebank, Stranraer, "*Cruggleton Beverley*" (256,591).

Silver Medal to the Breeder of the Winner of above Prize—given by the Shorthorn Society.

No. 5 Marshall, Albert James, Bridgebank, Stranraer.

Tweeddale Gold Medal, value about £25, for best Shorthorn Bull. "*Extra Stock*" eligible to compete.

No. 5 Marshall, Albert James, Bridgebank, Stranraer, "*Cruggleton Beverley*" (256,591).

*Breeder of best Bull of any age in Classes 1 to 5 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 5 Marshall, Albert James, Bridgebank, Stranraer.

#### CLASS 1. BULL, born before 1st December 1932.—

PREMIUMS, £15, £10, £5, and £3.

1st No. 5 Marshall, Albert James, Bridgebank, Stranraer, "*Cruggleton Beverley*" (256,591).

2nd No. 2 Baird, J., & Co. (Falkirk), Ltd., Bantaskin, Falkirk, "*Crieffvechter Desperado*" (249,960).

3rd No. 6 Robinson, Major H. C., Magheramorne, Co. Antrim, "*Cruggleton Premium*" (256,683).

4th No. 1 Anderson, William, Saphock, Oldmeldrum, "*Collynie Elite*" (256,385).

V No. 4 Lee, Norman N. (Stonelands), Ltd., Stonelands, Arncliffe, Skipton-in-Craven, "*Coldoch Double Event*" (256,355).

H No. 7 Webster, Duthie, Collynie, Tarves, "*Collynie Manifesto*" (236,188).

C No. 3 Brown, James P., Dipple, Fochabers, "*Glastullich Vanguard*" (244,312).

#### CLASS 2. BULL, born on or after 1st December 1932 and before

1st April 1933.—PREMIUMS, £15, £10, £5, and £3.

1st No. 8 Crawford and Balcarres, The Earl of, K.T., Balcarres House, Colinsburgh, Fife, "*Crieffvechter Finance*" (262,934).

#### CLASS 3. BULL, born on or after 1st April 1933 and before

1st December 1933.—PREMIUMS, £12, £8, £4, and £2.

1st No. 9 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen, "*Cluny Goldfinder*" (262,721).

**CLASS 4.** BULL, born on or after 1st December 1933 and before 1st April 1934.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 22 Stewart, Duncan M., Millhills, Crieff, "Anticur Wonder" (268,015).  
 2nd No. 17 Mackenzie, John, Balnain, Conon Bridge, Ross-shire, "Balnain Banker" (261,722).  
 3rd No. 15 Hill, R. Wylie, of Balthayock, Perth, "Calrossie Grand National" (268,893).  
 4th No. 19 Reid, John N., Cromleybank, Ellon, "Cromleybank White Eagle" (269,512).  
 V No. 14 Gordon, Trustees of the late A. P., Bindal, Portmahomack "Calrossie Air Pilot" (268,882).  
 H No. 21 Smith, R. Laidlaw, Pittodrie, Pitcaple, "Pittodrie Lifebuoy."  
 C No. 10 Campbell, Sylvester, Kinellar, Kinaldie, "Kinellar Quarter-block" (271,422).

The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value 50 Guineas, for best Shorthorn Bull in Class 5, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test. Given by Messrs J. Baird & Co. (Falkirk), Ltd., Bantaskin, Falkirk.

No. 27 Jones, Peter Forbes, Dunmore Park, Dunmore, "Cruggleton Reservist" (269,670).

Reserve—No. 23 Baird, J., & Co. (Falkirk), Ltd., Bantaskin, Falkirk, "Killineer Peter" (271,394).

**CLASS 5.** BULL, born on or after 1st April 1934.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 27 Jones, Peter Forbes, Dunmore Park, Dunmore, "Cruggleton Reservist" (269,670).  
 2nd No. 23 Baird, J., & Co. (Falkirk), Ltd., Bantaskin, Falkirk, "Killineer Peter" (271,394).  
 3rd No. 25 Duncan, Robert L. P., Pitpointie, Auchterhouse, Angus, "Pitpointie Quaker."  
 4th No. 32 Piper, James, of The Grange, Burntisland, "Letham Jimmy" (271,593).  
 V No. 33 Stewart, Duncan M., Millhills, Crieff, "Scotston Rara."  
 H No. 31 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Britannic" (269,573).

Best Shorthorn Female in the Show, entered or eligible for entry in Coates's Herd-Book—£20, given by the Shorthorn Society.

No. 41 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen, "Cluny Augusta 29th" (126,703).

Silver Medal to the Breeder of the winner of above Prize—given by the Shorthorn Society.

No. 41 Cathcart, The late Lady, Cluny Castle, Sauchen.

**CLASS 6.** COW, in Milk, born before 1st December 1931.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 39 Snadden, W. M'Nair, of The Coldoch, Blair Drummond,  
"Calrossie Roan Flora" (130,764).  
2nd No. 40 Snadden, W. M'Nair, of The Coldoch, Blair Drummond,  
"Coldoch Rosewood" (143,325).  
3rd No. 38 Murray, James, Balmerino, Wormit, Fife, "Clarice 5th"  
(131,663).  
4th No. 34 Baird, J., & Co. (Falkirk), Ltd., Bantaskin, Falkirk, "Collynie  
Red Eliza" (134,566).

*EXTRA STOCK.*

The following was awarded a Premium of £10 :—

- No. 41 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen,  
"Cluny Augusta 29th" (126,703).

**CLASS 7.** COW, in Milk, born on or after 1st December 1931 and  
before 1st December 1932.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 46 Robertson, Major William B., Colton, Dunfermline, "Scotston  
Bonny Broadhooks" (142,676).  
2nd No. 47 Stewart, Duncan M., Millhills, Crieff, "Cherrywood 4th"  
(153,187).  
3rd No. 43 Durno, James, Uppermill, Tarves, "Secret Poppy" (147,835).  
4th No. 45 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen,  
"Cluny Victoria 2nd" (146,586).  
H No. 44 Hill, R. Wylie, of Balthayock, Perth, "Balthayock Butterfly  
7th" (149,144).

**CLASS 8.** COW or HEIFER, born on or after 1st December 1932  
and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 48 Gordon, Trustees of the late A. P., Bindal, Portmahomack,  
Heifer, "Balmuchy Lavender 6th" (158,059).  
2nd No. 53 Stewart, Duncan M., Millhills, Crieff, Cow, "Uppermill  
Paula" (157,426).  
3rd No. 49 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen,  
Heifer, "Cluny Lady Augusta 11th" (158,076).  
4th No. 52 Snadden, W. M'Nair, of The Coldoch, Blair Drummond,  
Heifer, "Coldoch Rosewood 3rd" (162,725).  
V No. 50 Murray, James, Balmerino, Wormit, Fife, Heifer, "Nancy  
Marigold" (160,433).

**CLASS 9.** HEIFER, born on or after 1st December 1933 and before  
1st April 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 60 Hill, R. Wylie, of Balthayock, Perth, "Balthayock Augusta  
43rd."  
2nd No. 69 Stewart, Duncan M., Millhills, Crieff, "Millhills Missie 21st."  
3rd No. 63 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen,  
"Cluny Waterloo Princess 2nd."  
4th No. 71 Webster, Duthie, Collynie, Tarves, "Meadow Queen 19th."  
V No. 57 Durno, James, Uppermill, Tarves, "Orange Girl" (157,408).  
H No. 56 Crawford and Balcarres, The Earl of, K.T., Balcarres House,  
Colinsburgh, Fife, "Balcarres Edna."

- C No. 59 Graham, James Maxtone, of Redgorton, Perth, "Dorothy 31st."  
 C No. 65 Robertson, Major William B., Colton, Dunfermline, "Scotston Bonny Broadhooks 2nd" (162,001).  
 C No. 68 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Coldoch Miss Eillien."

**CLASS 10. HEIFER, born on or after 1st April 1934.—**  
**PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 75 Durno, James, Uppermill, Tarves, "Linnet."  
 2nd No. 76 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen, "Cluny Primrose 18th."  
 3rd No. 79 Stewart, Duncan M., Millhills, Crieff, "Scottish Buttercup 28th."  
 4th No. 77 Robertson, Major William B., Colton, Dunfermline, "Scotston Jealous Girl."  
 V No. 78 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Coldoch Golden Flower."  
 H No. 73 Campbell, Sylvester, Kinellar, Kinaldie, "Kinellar Crocus 6th."  
 C No. 74 Crawford and Balcarres, The Earl of, K.T., Balcarres House, Colinsburgh, Fife, "Balcarres Melissa."

**ABERDEEN-ANGUS.**

*PRESIDENT'S CHAMPION MEDAL for best Aberdeen-Angus Animal.*

No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

*Reserve*—No. 89 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Pelorus of Bywell" (78,476).

Paisley Perpetual Gold Challenge Cup, value £300, for best Aberdeen-Angus Animal. "Extra Stock" eligible to compete. This Cup, along with an endowment of £600, was provided from money collected in Paisley by the late Provost Muir M'Kean, and is in commemoration of the Society's first Show at Paisley in 1913.

No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

*Reserve*—No. 89 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Pelorus of Bywell" (78,476).

Silver Cup, value £50, for best Group of Aberdeen-Angus Cattle, consisting of one Bull and two Females. "Extra Stock" eligible to compete. Given by Mr W. Gilchrist Macbeth of Dunira, Comrie.

Nos. 93, 126, 134 Kerr, J. E., of Harviestoun, Dollar.

Ballindalloch Challenge Cup, value £50, for the best Bull of any age in Classes 11 to 14. Presented by the late Sir George Macpherson Grant, Bart.

No. 91 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Jellaba Eric" (84,640).

Silver Cup, value 50 Guineas, for best *Aberdeen-Angus Bull* born on or after 1st December 1932. Given by Senor Eduardo Estanguet, Argentina.

No. 91 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Jellaba Eric" (84,640).

*Breeder of best Bull of any age in Classes 11 to 14 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 91 J. E. Kerr of Harviestoun, Dollar.

*Exhibitor of the winner of the Ballindalloch Challenge Cup*—The Silver Medal.

No. 91 Allendale, Viscount, Bywell, Stocksfield-on-Tyne.

*Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

No. 91 J. E. Kerr of Harviestoun, Dollar.

**CLASS 11. BULL, born before 1st December 1932.—**  
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 83 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Euxidor 3rd" (77,307).
- 2nd No. 80 Cochran, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Eurindo of Bleaton" (80,724).
- 3rd No. 86 Moray Estates Development Co., Darnaway Estates Office, Forres, "Esquire of Ballindalloch" (80,674).
- 4th No. 88 Walker, Francis W., of Leys, Leys Castle, Inverness, "Primus of Lethen" (78,679).
- V No. 82 Duncan, John Bryce, Newlands, Dumfries, "Mogador of Newlands" (81,676).
- H No. 85 Macbeth, W. Gilchrist, of Dunira, Comrie, "Prince Peaceful of Minmore" (78,753).
- C No. 84 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Koko of Dunira" (81,477).

**EXTRA STOCK.**

The following was awarded a Premium of £10 :—

- No. 89 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Pelorus of Bywell" (78,476).

**CLASS 12. BULL, born on or after 1st December 1932 and before 1st December 1933.—**PREMIUMS, £15, £10, £5, and £3.

- 1st No. 91 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Jellaba Eric" (84,640).
- 2nd No. 96 Whyte, J. & J. L., Hayston, Glamis, "Boxer of Cults" (83,178).
- 3rd No. 93 Kerr, J. E., of Harviestoun, Dollar, "Jig Eric" (84,661).
- 4th No. 92 Duff, James, Boghead, Glass, Huntly, "Palaskor" (85,147).
- V No. 90 Abel, George, East Leylodge, Kintore, "Brae of Castlecraig" (83,190).
- H No. 94 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, "Baron Byron" (82,825).
- C No. 95 Stewart, Captain J. C., Murdostoun Castle, Newmains, "Demovan of Banks" (83,438).

**CLASS 13.** BULL, born on or after 1st December 1933 and before 1st March 1934.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 100 Cran, James B., Morlich, Glenkindie, "Emperor of Bleaton" (87,212).  
 2nd No. 106 Reid, Andrew T., Auchterarder House, Auchterarder, "Enterprise of Gloagburn" (87,255).  
 3rd No. 103 Grant, George, of Glenfarclas, Blacksboat, "Euxidor 7th" (87,489).  
 4th No. 97 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Elmhore of Bywell" (87,157).  
 V No. 108 Whyte, J. & J. L., Hayston, Glamis, "Exception of Peebles" (87,617).  
 H No. 101 Forbes, Allan, Tillybin, Kintore, "Picador of Tillybin" (88,817).  
 C No. 102 Forbes, Allan, Tillybin, Kintore, "Black Beauty of Ballintomb" (86,374).  
 C No. 104 Mackay, Charles, of Balnastraid, Carr Bridge, "Ejection of Bleaton" (87,049).  
 C No. 107 Templeton, T. & M., Sandyknowe, Kelso, "Jervis of Sandyknowe" (88,174).

**CLASS 14.** BULL, born on or after 1st March 1934.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 110 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Elver of Gallowhill" (87,177).  
 2nd No. 115 Grant, Robert M'Vitie, Logie Home Farm, Dunphail, Forres, "Emperor of Logie" (87,217).  
 3rd No. 111 Beddie, James, Banks, Strichen, "Gaffer Deberal" (87,680).  
 4th No. 116 Macbeth, W. Gilchrist, of Dunura, Comrie, "Primo of Dunura" (88,997).  
 V No. 113 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Polandor" (88,902).  
 H No. 117 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Brojar of Bleaton" (86,624).  
 C No. 114 Grant, Alan, Thorn, Blairgowrie, "Erillindor of Bleaton" (87,349).  
 C No. 119 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, "Generous of The Laws" (87,791).

Ballindalloch Challenge Cup, value £50, for the best Cow of any age in Classes 15 and 16. Presented by the late Sir John Macpherson, Bart.

No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

*Exhibitor of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

No. 134 Kerr, J. E., of Harviestoun, Dollar.

*Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

(Not Awarded.)

Silver Cup, value £50, for the best Female Animal of the Aberdeen-Angus breed. "Extra Stock" eligible to compete. Presented by Mr Falconer L. Wallace of Candacraig, Strathdon.

No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).



Champion Gold Medal, value £10, for best *Animal in the Breeding Classes*. *Breeding animals shown as "Extra Stock" eligible to compete*. Given by the Aberdeen-Angus Cattle Society.

No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

Special Jubilee Gold Medal for the best *Three Animals bred by Exhibitor and drawn from the Breeding Classes*. "Extra Stock" eligible to compete. To mark the Silver Jubilee of the accession to the Throne of His Majesty The King, Patron of the Aberdeen-Angus Cattle Society. Given by the Aberdeen-Angus Cattle Society.

Nos. 93, 126, 134 Kerr, J. E., of Harviestoun, Dollar.

**CLASS 15.** COW, in Milk, born before 1st December 1931.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 127 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Escorta of Bleaton" (84,629).
- 2nd No. 126 Kerr, J. E., of Harviestoun, Dollar, "Erective of Harviestoun" (97,061).
- 3rd No. 122 Beddie, James, Banks, Strichen, "Gammer Event" (92,542).
- 4th No. 123 Forbes, Allan, Tillybin, Kintore, "Estha of Addinston" (94,215).
- V No. 121 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Gem of Gallowhill 2nd" (95,649).
- H No. 129 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, "Pride of The Laws" (98,057).
- C No. 124 Grant, George, of Glenfarclas, Blacksboat, "Perruquière of Glenfarclas" (93,551).
- C No. 125 Grant, Robert M'Vitie, Logie Home Farm, Dunphail, Forres, "Rosebloom of Ballindalloch" (83,915).
- C No. 128 Reid, J. A. & P., Nether Kildrummy, Mossat, Alford, "Pearl of Kildrummy" (91,454).

**CLASS 16.** COW, in Milk, born on or after 1st December 1931 and before 1st December 1932.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 134 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).
- 2nd No. 132 Jenkins, George John, Templand Farm, Templand, Lockerbie, "Lilac of Pitskelly" (100,785).
- 3rd No. 130 Beddie, James, Banks, Strichen, "Romica of Banks" (98,846).
- 4th No. 136 Waddell, James Dalziel, Clury, Grantown-on-Spey, "Aclurya Pomp" (101,457).
- V No. 135 Russell, G. H., of The Burn, Glenesk, Brechin, "Proud Balgama of The Burn" (101,062).
- H No. 133 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Bettine of Doonholm" (100,117).
- C No. 131 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Juva" (99,321).

**CLASS 17.** COW or HEIFER, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 145 Macbeth, W. Gilchrist, of Dunira, Comrie, Heifer, "Black Beronia 2nd of Dunira" (103,182).
- 2nd No. 137 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, Heifer, "Eva of Gallowhill 3rd" (101,752).

- 3rd No. 142 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, Heifer, "Bryntirian of Doonholm" (103,049).  
 4th No. 144 Kerr, J. E., of Harviestoun, Dollar, Heifer, "Julma Erica" (103,069).  
 V No. 139 Beddie, James, Banks, Strichen, Heifer, "Evola of Banks" (101,799).  
 H No. 138 Beddie, James, Banks, Strichen, Heifer, "Gammer Gratis" (101,810).  
 C No. 143 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, Heifer, "Bunty of Doonholm" (103,050).  
 C No. 146 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, Heifer, "Baroness of The Laws" (104,014).  
 C No. 141 Grant, A. D., Mains of Dalvey, Advie, Heifer, "Jean of Tullochgribban" (103,919).

**CLASS 18. HEIFER, born on or after 1st December 1933 and before 1st March 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 152 Forbes, Allan, Tillybin, Kintore, "Averil Erica" (105,540).  
 2nd No. 153 Forteviot, Lord, of Dupplin, Dupplin Castle, Perth, "Elysa of Dupplin" (105,572).  
 3rd No. 165 Templeton, T. & M., Sandyknowe, Kelso, "Pretty Pride of Sandyknowe" (107,392).  
 4th No. 159 Kerr, J. E., of Harviestoun, Dollar, "Ethera of Harviestoun" (106,102).  
 V No. 149 Beddie, James, Banks, Strichen, "Gammer Goldie" (104,735).  
 H No. 160 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Evasion 3rd of Morlich" (105,160).  
 C No. 150 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Witch of Cults" (105,085).  
 C No. 161 Osmond, Leslie K., Beelsby, Grimsby, "Anjesca of Bleaton" (106,487).  
 C No. 162 Reid, Andrew T., Auchterarder House, Auchterarder, "Gitana of Auchterarder" (106,920).  
 C No. 163 Russell, G. H., of The Burn, Glenesk, Brechin, "Bubona of The Burn" (107,077).

**CLASS 19. HEIFER, born on or after 1st March 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 167 Beddie, James, Banks, Strichen, "Gammer Ebenil" (104,726).  
 2nd No. 172 Macbeth, W. Gilchrist, of Dunnira, Comrie, "Bonnie Maid 2nd of Dunnira" (106,241).  
 3rd No. 173 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Eolidya of Bleaton" (106,504).  
 4th No. 175 Templeton, T. & M., Sandyknowe, Kelso, "Edwina 5th of Kilmaronock" (105,149).  
 V No. 169 Forbes, Allan, Tillybin, Kintore, "Everilla of Tillybin" (105,543).  
 H No. 171 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Manzanilla of Doonholm" (106,091).  
 C No. 166 Beddie, James, Banks, Strichen, "Rosa of Banks" (104,739).  
 C No. 174 Stewart, Captain J. C., Murdostoun Castle, Newmains, "Barada of Murdostoun" (107,231).

## GALLOWAY.

*PRESIDENT'S CHAMPION MEDAL for best Galloway Animal.*

No. 194 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
"Wells Ruby Princess 5th" (31,772).

*Reserve*—No. 196 Buchanan-Jardine, Sir John William, of Castle Milk,  
Bart., Castle Milk, Lockerbie, "Nazetta 3rd of Castle  
Milk" (30,930).

Dr Gillespie Memorial Challenge Trophy, value £50, for best Galloway Animal  
in the Breeding Classes. Breeding animals shown as "Extra Stock"  
eligible to compete. Presented by the Galloway Cattle Society of Great  
Britain and Ireland.

No. 194 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
"Wells Ruby Princess 5th" (31,772).

Silver Challenge Cup, value £50, for best animal of the sex opposite to that of  
the winner of the Dr Gillespie Memorial Challenge Trophy. "Extra  
Stock" eligible to compete. Presented by the Galloway Cattle Society  
to commemorate the Hundredth Show.

No. 177 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
"John S. T. of Blair" (18,512).

*Breeder of best Bull of any age in Classes 20 to 22 ("Extra Stock" not eligible  
to compete)*—The Silver Medal.

No. 177 Black, John, Blair, Maybole.

**CLASS 20. BULL, born before 1st December 1932.—**  
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 177 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
"John S. T. of Blair" (18,512).  
2nd No. 176 Anderson, James Keith, Kirtleton, Waterbeck, Dumfries-  
shire, "Grange Marksman" (18,500).  
3rd No. 178 Graham, Andrew, Auchengassel, Twynholm, Kirkcudbright-  
shire, "Link Boy of Tundergarth Mains" (18,471).

**CLASS 21. BULL, born on or after 1st December 1932 and before  
1st December 1933.—PREMIUMS, £15, £10, £5, and £3.**

- 1st No. 183 Paterson, Robert Jardine, Balgray, Lockerbie, "Exclusive  
of Balgray" (19,107).  
2nd No. 184 Walker, Francis W., of Leys, Leys Castle, Inverness, "Kirk-  
lands Private" (19,006).  
3rd No. 182 Kennedy-Moffat, W., Auchencheyne, Moniaive, Dumfries-  
shire, "Teetotum of Scroggiehall" (19,272).  
4th No. 181 Graham, Robert, Chapel of Logan, Canonbie, "Kirklands  
Lieutenant" (19,003).  
V No. 180 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, "Erebus of Blawquhairn"  
(19,279).

**CLASS 22.** BULL, born on or after 1st December 1933.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 186 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, "Grange Olympus" (19,354).  
2nd No. 190 Paterson, Robert Jardine, Balgray, Lockerbie, "Joseph of  
Tullichewan" (19,781).  
3rd No. 189 Murray, Jacob S., Dalrig, New Cumnock, Ayrshire,  
"Knuckleduster of Knockdon" (19,707).  
4th No. 187 Graham, Andrew, Auchengassel, Twynholm, Kirkcudbright-  
shire, "Braw Boy."  
V No. 188 Murdoch, James, Knockdon, Straiton, Ayrshire, "Knock-  
don" (19,702).  
H No. 185 Black, James, Blair, Maybole, "Lionel of Blair" (19,367).

**CLASS 23.** COW, in Milk, born before 1st December 1932.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 194 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
"Wells Ruby Princess 5th" (31,772).  
2nd No. 191 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfries-  
shire, "Musk Rose of Drumlanrig" (34,935).  
3rd No. 193 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, "Lilac of Castle Milk" (33,728).  
4th No. 195 Graham, Robert, Chapel of Logan, Canonbie, "May Queen  
6th of Logan" (31,440).

*EXTRA STOCK.*

The following was awarded a Premium of £10 :—

- No. 196 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, "Nazetta 3rd of Castle Milk"  
(30,930).

**CLASS 24.** COW or HEIFER, born on or after 1st December 1932  
and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 208 Little, D. & J., Whitehill, Corrie, Lockerbie, Heifer, "Nettie  
28th of Whitehill" (35,929).  
2nd No. 205 Graham, Robert, Chapel of Logan, Canonbie, Heifer, "Logan  
Lady 35th" (35,813).  
3rd No. 204 Graham, Christopher E., Bogrie, Canonbie, Heifer, "Glenzier  
Lady 11th" (35,807).  
4th No. 198 Carruthers, Lieut.-Colonel F. J., of Dormont, Lockerbie,  
Heifer, "Erica of Dormont" (35,609).  
V No. 200 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
Heifer, "Rose of Gilchristland" (35,705).  
H No. 202 Gourlay, Francis N. M., Kirkland, Tynron, Dumfriesshire,  
Heifer, "Bangle 4th of Kirkland" (35,798).  
C No. 203 Gourlay, Francis N. M., Kirkland, Tynron, Dumfriesshire,  
Heifer, "Flirt 4th of Kirkland" (35,802).  
C No. 199 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
Heifer, "Eliza of Gilchristland" (35,694).  
C No. 207 Little, D. & J., Whitehill, Corrie, Lockerbie, Heifer,  
"Twilight of Meikle Whitriggs" (35,630).

**CLASS 25. HEIFER, born on or after 1st December 1933.—**  
**PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 216 Gourlay, Francis N. M., Kirkland, Tynron, Dumfriesshire,  
 " \*Talitha " (36,961).
- 2nd No. 223 Sinclair, Lady, Blawquhairn, Dalry, Castle Douglas, " For-  
 tuna of Blawquhairn " (36,884).
- 3rd No. 211 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfries-  
 shire, " Sunmaid of Drumlanrig " (36,291).
- 4th No. 213 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
 Castle Milk, Lockerbie, " Lilac 3rd of Castle Milk "  
 (36,611).
- V No. 214 Carruthers, Lieut.-Colonel F. J., of Dormont, Lockerbie,  
 " Ruth of Dormont " (36,326).
- H No. 215 Duncan, Arthur B., Gilchristland, Closeburn, Dumfriesshire,  
 " Curly 4th of Gilchristland " (36,421).
- C No. 210 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfries-  
 shire, " Nonsuch of Drumlanrig " (36,289).
- C No. 212 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
 Castle Milk, Lockerbie, " Beatrice 2nd of Castle Milk "  
 (36,605).
- C No. 218 Kennedy-Moffat, W., Auchencheyne, Moniaive, Dumfries-  
 shire, " Lena 2nd of Lochurr " (36,632).

**BELTED GALLOWAY.**

*PRESIDENT'S CHAMPION MEDAL for best Belted Galloway Animal.*

- No. 240 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, Cow,  
 " Mochrum Cissie of Craigeach " (3014 B).

*Reserve*—No. 227 Sproat, J. Faed, Boreland of Anwoth, Gatehouse,  
 Galloway, " Gartmore Charles " (701 B).

Knockbren Challenge Cup, value £50, for the *Best Belted Galloway Animal*.  
 " *Extra Stock* " eligible to compete. This Cup was presented by Mrs  
 Brown, Kirkbren, Glasgow, for the best Belted Galloway animal  
 registered in the Dun and Belted Galloway Cattle Breeders'  
 Association Herd-Book, entered in any of the breeding classes, at the  
 Show at which it may be competed for.

- No. 240 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, Cow,  
 " Mochrum Cissie of Craigeach " (3014 B).

The Ian Hamilton Silver Challenge Cup, value £50, for the *best Belted Galloway Animal of the sex opposite to that of the winner of the Knockbren Challenge Cup*. " *Extra Stock* " eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belted Galloway Herd-Book. This Cup was presented by General Sir Ian Hamilton, G.C.B.

- No. 227 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway,  
 " Gartmore Charles " (701 B).

Special Prize of £7 for Best Group of Belled Galloway Animals consisting of one Bull and two Females. "Extra Stock" eligible to compete. Given by Miss Monica M. M'Laren.

Nos. 233, 237, 244 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling.

Breeder of Best Bull in Classes 26 and 27 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 224 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright.

**CLASS 26. BULL, born before 1st December 1933.—**  
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 224 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, "Knockbrex Goliath" (887 B).
- 2nd No. 226 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Peter" (1033 B).
- 3rd No. 225 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Concrete" (983 B).

**EXTRA STOCK.**

The following was awarded a Premium of £10 :—

- No. 227 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, "Gartmore Charles" (701 B).

**CLASS 27. BULL, born on or after 1st December 1933.—**  
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 233 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Mark Barney" (1087 B).
- 2nd No. 230 Graham, Andrew, Auchengassel, Twynholm, "Mark Bobs" (1101 B).
- 3rd No. 229 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, "Knockbrex Leopold" (1093 B).
- 4th No. 228 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, "Knockbrex Laird" (1091 B).
- V No. 232 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Kepnoch" (1081 B).
- H No. 231 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Kindrum" (1083 B).

**CLASS 28. COW or HEIFER, born before 1st December 1932, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show.—**PREMIUMS, £10, £5, £3, and £2.

- 1st No. 240 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, Cow, "Mochrum Cissie of Craigeach" (3014 B).
- 2nd No. 237 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Doreen II." (2056 B).
- 3rd No. 236 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Margaret I." (1850 B).
- 4th No. 238 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Norah I." (2066 B).
- V No. 239 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Dandy IV." (3054 B).
- H No. 235 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, Cow, "Lullenden Estelle II." (2118 B).
- C No. 234 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, Cow, "Knockbrex Fleur de Lys" (1596 B) (D).

**CLASS 29.** HEIFER, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 244 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Christian III." (3220 B).  
 2nd No. 241 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, "Knockbrex Kitty" (3250 B).  
 3rd No. 243 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Mollie III." (3240 B).  
 4th No. 242 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Betty" (3282 B).

**CLASS 30.** HEIFER, born on or after 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 246 Graham, Andrew, Auchengassel, Twynholm, "Mark Bess IV." (3408 B).  
 2nd No. 252 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Helen II." (3328 B).  
 3rd No. 249 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Etty" (3418 B).  
 4th No. 251 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Christian IV." (3318 B).  
 V No. 250 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Mona I." (3336 B).  
 H No. 245 Brown, J. Douglas, Corseyard, Borgue, Kirkcudbright, "Knockbrex Lorna" (3356 B).  
 C No. 248 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Ena" (3414 B).

## HIGHLAND.

*PRESIDENT'S CHAMPION MEDAL for best Highland Animal.*

No. 260 Morrison, John G., of Islay, Islay House, Bridgend, Islay, "Fear Tagraidh Ile" (3823).

*Reserve*—No. 279 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Baravalla Smiorail II. of Killundine" (10,636).

Perpetual Victory Challenge Cup, approximate value 50 Guineas, for the best Animal in the Male Classes. "Extra Stock" eligible to compete. Given by the Highland Cattle Society of Scotland.

No. 260 Morrison, John G., of Islay, Islay House, Bridgend, Islay, "Fear Tagraidh Ile" (3823).

*Breeder of Best Bull in Classes 31 to 33 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 260 Morrison, John G., of Islay, Islay House, Bridgend, Islay.

**CLASS 31.** BULL, born before 1st December 1932.—PREMIUMS, £15, £10, £5, and £3.

(No Entry.)

**CLASS 32.** BULL, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £15, £10, £5, and £3.

- 1st No. 253 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "An Gille Snasar of Killundine" (3743).
- 2nd No. 255 Southesk, The Earl of, Kinnaird Castle, Brechin, "Ceatharnach of Southesk" (3780).
- 3rd No. 256 Walker, Francis W., of Leys, Leys Castle, Inverness, "Duke of Leys" (3757).

**CLASS 33.** BULL, born on or after 1st December 1933.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 260 Morrison, John G., of Islay, Islay House, Bridgend, Islay, "Fear Tagraidh Ile" (3823).
- 2nd No. 258 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "An Mharairnach of Killundine" (3813).
- 3rd No. 259 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "An Barraiche of Killundine" (3812).
- 4th No. 261 Walker, Francis W., of Leys, Leys Castle, Inverness, "Alasdair of Leys" (3797).

Perpetual Victory Challenge Cup, approximate value 35 Guineas, *for the best Animal in the Female Classes. "Extra Stock" eligible to compete.*  
Given by the Highland Cattle Society of Scotland.

- No. 279 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Baravalla Smiorail II. of Killundine" (10,636).

**CLASS 34.** COW, of any age, with Calf at foot.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 266 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Una Bhuidhe III. of Killundine" (10,586).
- 2nd No. 269 Walker, Francis W., of Leys, Leys Castle, Inverness, "Una IV. of Flichity" (10,443).
- 3rd No. 263 Dalgleish, James P., of Westgrange, Newmills, Dunfermline, "Violet XI. of Kilchamaig" (10,622).
- 4th No. 268 Southesk, The Earl of, Kinnaird Castle, Brechin, "Madam Corrina" (10,507).
- V No. 265 Home, The Earl of, K.T., Douglas Castle, Lanark, "Sine An-t-Uramach" (10,543).
- H No. 264 Home, The Earl of, K.T., Douglas Castle, Lanark, "An-t-Uramach Morag" (10,395).
- C No. 267 Maitland, Brig.-General J. D. Heriot, C.M.G., D.S.O., of Errol, Errol Park, Errol, "Sheila III. of Errol" (10,375).

### EXTRA STOCK.

The following was awarded a Premium of £10 :—

- No. 270 Walker, Francis W., of Leys, Leys Castle, Inverness, "Annag Ruadh of Bochastle" (10,156).



**CLASS 35.** HEIFER, born on or after 1st December 1931 and before 1st December 1932.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 273 Southesk, The Earl of, Kinnaird Castle, Brechin, "Lady Mairi II." (10,722).  
 2nd No. 275 Walker, Francis W., of Leys, Leys Castle, Inverness, "Giorsal of Leys" (10,605).  
 3rd No. 274 Southesk, The Earl of, Kinnaird Castle, Brechin, "Corrina III. of Southesk" (10,723).  
 4th No. 271 Lees-Milne, Mrs. of Killundine, Drimnin, Oban, "Bean Bhan II. of Killundine" (10,598).  
 V No. 272 Maitland, Brig.-General J. D. Heriot, C.M.G., D.S.O., of Errol, Errol Park, Errol, "Lydia Queen II. of Errol" (10,613).

**CLASS 36.** HEIFER, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 279 Lees-Milne, Mrs. of Killundine, Drimnin, Oban, "Baravalla Smiorail II. of Killundine" (10,636).  
 2nd No. 281 Morrison, John G., of Islay, Islay House, Bridgend, Islay, "Annag Ruadh Ile IV." (10,694).  
 3rd No. 282 Southesk, The Earl of, Kinnaird Castle, Brechin, "Ban-Bharran of Southesk" (10,724).  
 4th No. 284 Walker, Francis W., of Leys, Leys Castle, Inverness, "Eilidh II. of Leys" (10,656).  
 V No. 276 Daigleish, James P., of Westgrange, Newmills, Dunfermline, "Capleadh XV. of Achnacloich" (10,717).  
 H No. 277 Dunlop, Miss, of Shieldhill, Biggar, "Dossan of Quothquan" (10,698).  
 C No. 278 Home, The Earl of, K.T., Douglas Castle, Lanark, "Proisaig Dubh" (10,706).  
 C No. 280 Maitland, Brig.-General J. D. Heriot, C.M.G., D.S.O., of Errol, Errol Park, Errol, "Mairi Voil of Errol" (10,673).  
 C No. 283 Thomson, Misses S. W. and B. L., Glenpark, Balerno, "Princess Ruadh II. of Achnacloich" (10,718).

**CLASS 37.** HEIFER, born on or after 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 285 Dunlop, Miss, of Shieldhill, Biggar, "Sidonia of Quothquan" (10,806).  
 2nd No. 286 Dunlop, Miss, of Shieldhill, Biggar, "Maireared of Quothquan" (10,805).  
 3rd No. 294 Southesk, The Earl of, Kinnaird Castle, Brechin, "Cassandra."  
 4th No. 293 Morrison, John G., of Islay, Islay House, Bridgend, Islay, "Daoimen Ile" (10,840).  
 V No. 290 Lees-Milne, Mrs. of Killundine, Drimnin, Oban, "Una Bhuidhe V. of Killundine" (10,818).  
 H No. 288 Home, The Earl of, K.T., Douglas Castle, Lanark, "Proisaig Ruadh" (10,850).  
 C No. 287 Home, The Earl of, K.T., Douglas Castle, Lanark, "Morag Milis" (10,852).  
 C No. 291 Maitland, Brig.-General J. D. Heriot, C.M.G., D.S.O., of Errol, Errol Park, Errol, "Fiona Maid II. of Errol" (10,854).

## AYRSHIRE.

### CONDITIONS.

1. To be eligible for competition in the Ayrshire Section cows must have an authenticated milk yield, and younger females (including cows which have not completed their first lactation) and bulls an authenticated milking pedigree, of a definite minimum amount.
2. The minimum amount referred to shall be as follows, calculated on the basis of a period between calvings of 52 weeks, and 3.8 per cent of butter fat :—
  - (a) Cows which have completed two or more lactations—700 gallons.
  - (b) Cows which have completed only one lactation—600 gallons.
  - (c) Younger females and bulls—an authenticated milking pedigree for dam and dam of sire on a similar basis.
3. In the case of cows with two or more lactations the record lodged may be that for any year the Exhibitor may select.

### PRESIDENT'S CHAMPION MEDAL for best Ayrshire Animal.

No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).

*Reserve*—No. 369 Reid, R. M., The Glen Farm, Falkirk, "Lessnessock Humanity" (32,263).

Edinburgh Corporation Perpetual Gold Challenge Cup for best Ayrshire Animal. "*Extra Stock*" eligible to compete. This Cup was presented by the City of Edinburgh to commemorate the Society's Hundredth Show.

No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).

*Reserve*—No. 369 Reid, R. M., The Glen Farm, Falkirk, "Lessnessock Humanity" (32,263).

Cowhill Champion Cup, approximate value £30, for best Animal of the Ayrshire breed, entered with a number in the Herd-Book. Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd-Book Society, to be competed for annually at the Shows of the Highland and Agricultural Society of Scotland.

No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).

Special Prize of £10 for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1935. "*Extra Stock*" eligible to compete. Given by the Ayrshire Cattle Herd-Book Society.

No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).

**CLASS 38.** COW, in Milk, born before 1932.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).  
 2nd No. 304 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, Fife, "Logan Mains Mary 2nd" (A 9665).  
 3rd No. 301 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Balmae Lily 8th" (19,514).  
 4th No. 299 Drummond, John N., Bargower, Hurlford, "Bargower Silver Bell 13th" (31,759).  
 V No. 300 M'Alister, James, Meikle Kilmory, Rothesay, "Meikle Kilmory Bluebird 3rd" (16,934).

**CLASS 39.** COW, in Milk, born on or after 1st January 1932.—  
PREMIUMS, £10, £7, £3, and £2.

- 1st No. 308 Clark, John, Dunrod Farm, Inverkip, "Dunrod Elf 3rd" (47,402).  
 2nd No. 311 M'Alister, Robert, Mid Ascog, Rothesay, "Mid Ascog Patience" (51,665).  
 3rd No. 307 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 4th" (47,411).  
 4th No. 315 Turner, James, Loaninghead, Balfron Station, "Loaninghead Zena."  
 V No. 329 Cochrane, Alexander, Nether Craig, Kilmarnock, "Nether Craig Marie" (48,220).  
 H No. 305 Caldwell, David, & Sons, Pennyfadzeoch, Cumnock, Ayrshire, "Pennyfadzeoch Bloomer 3rd" (50,203).

**CLASS 40.** COW, of any age, in Calf, and due to calve before 1st December of the year of the Show.—PREMIUMS, £10, £7, £3, and £2.

- 1st No. 318 Clark, John, Dunrod Farm, Inverkip, "Dunrod Snowflake 5th" (36,867).  
 2nd No. 321 Howie, James, & Sons, Muirside, Dumfries, "Howie's Dairy Lass 3rd" (44,126).  
 3rd No. 319 Corporation of Dundee, Gourdie Farm, Dundee, "Creoch Joan" (2949).  
 4th No. 317 Blair, William C., Dykehead Farm, Carmunnock, Lanarkshire, "Aitkenbrae Young Nannie 3rd" (5360).  
 V No. 323 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Lessnessock Florrie" (42,946).

**CLASS 41.** HEIFER, born on or after 1st June 1932, in Calf, and due to calve before 1st December of the year of the Show.—PREMIUMS, £10, £7, £3, and £2.

- 1st No. 336 MacKay, Robert, Bruchag Farm, Rothesay, "Bruchag Princess" (53,798).  
 2nd No. 313 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Lessnessock Fiona" (54,486).

- 3rd No. 342 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, Fife, "Wemyss Orange" (A 311).  
 4th No. 333 Dalziel, Robert, Rue, Auldgirth, Dumfriesshire, "Rue Gwen."  
 V No. 338 Roberts, J. D., Strathallan Castle, Auchterarder, "Strathallan Sally" (52,067).  
 H No. 328 Clark, John, Dunrod Farm, Inverkip, "Dunrod Tulip 5th" (48,175).  
 C No. 341 Sloan, Mungo, Hunter House, Lochmaben, "Hunter House Queen May" (49,840).

**CLASS 42. HEIFER, born in 1933.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 347 Logan, W. & J., Burton Farm, Ayr, "Burton Bloomer" (52,340).  
 2nd No. 346 Logan, W. & J., Burton Farm, Ayr, "Burton May" (52,348).  
 3rd No. 350 Sloan, Mungo, Hunter House, Lochmaben, "Hunter House Moss Rose 3rd" (49,836).  
 4th No. 344 Buchanan, Andrew, Burnside of Balhaldie, Braco, Perthshire, "Balhaldie Bloom."  
 V No. 348 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Westburn Miss Marjory."  
 H No. 345 Dalziel, Robert, Rue, Auldgirth, Dumfriesshire, "Rue Marigold" (51,739).

**CLASS 43. HEIFER, born in 1934.—PREMIUMS, £8, £5, £3, and £2.**

- 1st No. 358 Logan, W. & J., Burton Farm, Ayr, "Burton Anna" (57,052).  
 2nd No. 359 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Millantae Perfect Lady" (57,582).  
 3rd No. 361 Wallace, David, Auchenbrain, Mauchline, "Auchenbrain Miss Craig 86th" (61,913).  
 4th No. 356 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Cults Boheme" (60,519).  
 V No. 357 Corporation of Dundee, Gourdie Farm, Dundee, "West Green Imp" (59,420).  
 H No. 355 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Cults Benita" (60,507).  
 C No. 354 Buchanan, Andrew, Burnside of Balhaldie, Braco, Perthshire, "Balhaldie Bride."

*Breeder of best Bull of any age in Classes 44 to 46 ("Extra Stock" not eligible to compete)—The Silver Medal.*

No. 369 A. W. Montgomerie, Westburn Farm, Cambuslang, Glasgow.

*Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1935. "Extra Stock" eligible to compete. Given by the Ayrshire Cattle Herd-Book Society.*

No. 369 Reid, R. M., The Glen Farm, Falkirk, "Lessnessock Humanity" (32,263).

**CLASS 44.** BULL, born before 1933.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 369 Reid, R. M., The Glen Farm, Falkirk, "Lessnessock Humanity" (32,263).  
 2nd No. 364 Clark Brothers, Fingart Farm, Dunlop, "Laigh Smithston Gay Gordon" (33,020).  
 3rd No. 363 Caldwell, David, & Sons, Pennyfadzeoch Farm, Cumnock, "Howie's Expectation" (32,886).  
 4th No. 366 Dalziel, Robert, Rue, Auldgrith, Dumfriesshire, "Rue Flash Boy" (34,175).  
 V No. 362 Buchanan, Andrew, Burnside of Balhaldie, Braco, Perthshire, "Cults Magog" (31,069).  
 H No. 365 Corporation of Dundee, Gourdie Farm, Dundee, "Willoxton Fancy Lad" (32,413).  
 C No. 368 Osmond, Leslie K., Netherwood Dairy Farms, Bradley, Grimsby, "Auchenbrain Display" (32,429).

**CLASS 45.** BULL, born in 1933.—PREMIUMS, £10, £7, £3, and £2.

- 1st No. 371 Wallace, David, Auchenbrain, Mauchline, "Westburn Boy Blue" (33,960).  
 2nd No. 370 Cochran, Alexander, Nether Craig, Kilmarnock, "Chapelhill Buster" (33,140).

**CLASS 46.** BULL, born in 1934.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 374 Logan, W. & J., Burton Farm, Ayr, "Sandhill Perfect Print" (34,584).  
 2nd No. 378 Wallace, David, Auchenbrain, Mauchline, "Auchenbrain Ideal".  
 3rd No. 375 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Barboigh Radio" (35,328).  
 4th No. 373 Howie, James, & Sons, Muirside, Dumfries, "Grange Capture" (35,064).  
 V No. 372 Crichton Royal Institution, The Farm, Crichton Royal, Dumfries, "Cowgrove Endeavour" (34,640).  
 H No. 377 Sloan, Mungo, Hunter House, Lochmaben, "Harleyholm Omar" (34,300).

**BRITISH FRIESIAN.***PRESIDENT'S CHAMPION MEDAL for best  
British Friesian Animal.*

- No. 430 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigiemains Ideal" (34,053).  
*Reserve*—No. 386 Craig, John, Green Farm, Linwood, Paisley, "Cart Kiola" (154,384).

The MacRobert Champion Silver Bell, value 50 Guineas, for the best Animal in the British Friesian Classes, registered in or eligible for entry in the British Friesian Cattle Society's Herd-Book. "Extra Stock" eligible to compete. Presented by Lady Rachel Workman MacRobert, Doune-side, Tairland.

- No. 430 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigiemains Ideal" (34,053).

Silver Challenge Cup, value 50 Guineas, for the best Group of three animals.  
*"Extra Stock" eligible to compete.* Given by the British Friesian Cattle Society.

Nos. 384, 400, 440 Weightman, Albert, Middle Herrington Farm, Sunderland.

Champion Prize of £5 given by the British Friesian Cattle Society for the best Female Animal exhibited. *"Extra Stock" eligible to compete.*

No. 386 Craig, John, Green Farm, Linwood, Paisley, "Cart Kiola" (154,384).

**CLASS 47. COW, in Milk, born in or before 1931.—**  
 PREMIUMS, £12, £8, £4, and £2.

- 1st No. 384 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Image" (127,872).
- 2nd No. 381 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Primula 2nd" (155,754 R.M.).
- 3rd No. 382 Sinclair, David, Loirston, Nigg, Aberdeen, "Loirston Princess Mary 3rd" (129,292 R.M.).

**CLASS 48. COW, in Calf, and not in Milk, born in or before 1931.—**  
 PREMIUMS, £10, £5, £3, and £2.

- 1st No. 386 Craig, John, Green Farm, Linwood, Paisley, "Cart Kiola" (154,384).
- 2nd No. 388 Gladstone, Thomas E., Margery Flatts, Lanchester, Co. Durham, "Dignit Logic" (135,916).
- 3rd No. 390 Pathhead & Sinclairtown Reform Co-operative Society, Ltd., 102 Commercial Street, Kirkcaldy, "Ranfurly Coll" (120,582).
- 4th No. 389 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Becula 5th" (145,894 R.M.).
- V No. 385 Craig, John, Green Farm, Linwood, Paisley, "Cart Ideal" (134,628 R.M.).
- H No. 391 Sinclair, David, Loirston, Nigg, Aberdeen, "Loirston Susanna 9th" (118,632).

**CLASS 49. COW, in Milk, born in 1932 or 1933.—**  
 PREMIUMS, £10, £5, £3, and £2.

- 1st No. 400 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Hatsumer Mae" (168,308 P.I.).
- 2nd No. 396 Craig, John, Green Farm, Linwood, Paisley, "Cart Lala" (164,876).
- 3rd No. 397 Gladstone, Thomas E., Margery Flatts, Lanchester, Co. Durham, "Dignit Lass" (166,344).
- 4th No. 395 Christison, John, Crossveggate, Milngavie, "Crossveggate Pel Daisy" (165,944).

**CLASS 50. HEIFER, born in 1933.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 405 Glentanar, Lord, Home Farm, Glen Tanar, Aboyne, "Glen-tanar Rikonette" (178,488).  
 2nd No. 402 Christison, John, Crossveggate, Milngavie, "Crossveggate Pel Bloom" (176,906).  
 3rd No. 409 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Narcissi" (179,296).  
 4th No. 404 Glentanar, Lord, Home Farm, Glen Tanar, Aboyne, "Glen-tanar Rikella" (178,486 P.I.).  
 V No. 408 Sinclair, David, Loirston, Nigg, Aberdeen, "Loirston Jeltje 6th" (180,526 P.I.).  
 H No. 407 MacRobert, Trustees of Sir Alasdair W., Bart, Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Laura" (177,402).

**CLASS 51. HEIFER, born in 1934, before 1st July.—  
PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 414 MacRobert, Trustees of Sir Alasdair W., Bart, Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Petunia" (188,474).  
 2nd No. 419 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Olive" (190,270).  
 3rd No. 411 Glentanar, Lord, Home Farm, Glen Tanar, Aboyne, "Glen-tanar Rikena" (189,514).  
 4th No. 415 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Moira" (188,470).  
 V No. 416 Sinclair, David, Loirston, Nigg, Aberdeen, "Loirston Jeltje 7th" (191,568 P.I.).  
 H No. 413 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie-mains Lady Vera" (187,774).  
 C No. 410 Christison, John, Crossveggate, Milngavie, "Crossveggate Grethika" (187,930 P.I.).  
 C No. 418 Spence, Andrew, Commieston, Montrose, "Commieston Minlass" (187,500).

**CLASS 52. HEIFER, born in 1934, on or after 1st July.—  
PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 424 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Elma 2nd" (188,454).  
 2nd No. 421 Christison, John, Crossveggate, Milngavie, "Crossveggate Dairymaid" (187,914).  
 3rd No. 422 Glentanar, Lord, Home Farm, Glen Tanar, Aboyne, "Glen-tanar Jouhka" (189,502 P.I.).  
 4th No. 426 Sinclair, David, Loirston, Nigg, Aberdeen, "Loirston Jeltje 9th" (191,572 P.I.).  
 V No. 423 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie-mains Lady Dorothy 2nd" (187,770).  
 H No. 429 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Overjoy" (190,304).

*Breeder of Best Bull of any age in Classes 53 to 55 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 430 Kilpatrick, James, Craigie Mains, Kilmarnock.

Champion Prize of £5 given by the British Friesian Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.

No. 430 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigiemains Ideal" (34,053).

**CLASS 53. BULL, born in or before 1932.—**  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 430 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigiemains Ideal" (34,053).
- 2nd No. 432 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Marcellus 2nd" (35,647).
- 3rd No. 433 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Lingman" (39,149 R.M.P.).

**EXTRA STOCK.**

The following was awarded a Premium of £10 :—

- No. 434 M'Ilchere, Malcolm, Cartside Farm, Thorntonhall, Lanarkshire, "Kintyre Thorn" (36,047).

**CLASS 54. BULL, born in 1933.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 440 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Hatsummer Neptune" (42,331 P.I.).
- 2nd No. 438 MacLennan, Duncan Alexander, Balmachree, Inverness, "Balmachree Norman" (41,559).
- 3rd No. 436 Craig, John, Green Farm, Linwood, Paisley, "Tarvin Asset" (43,037).
- 4th No. 439 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Terling Martinique" (43,071 R.M.P.).
- V No. 435 Collie, George, Hillbrae, Inverurie, "Douneside Banner" (42,013).
- H No. 437 Easson, George, Sheephousell Farm, Dunfermline, "Douneside Bala" (42,011).

**CLASS 55. BULL, born in 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 444 Pathhead & Sinclairtown Reform Co-operative Society, Ltd., 102 Commercial Street, Kirkcaldy, "Loirston King 2nd" (44,317).
- 2nd No. 443 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Benachie" (43,835).
- 3rd No. 442 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside, Melgum, and Cromar Farms, Tarland, Aberdeenshire, "Douneside Apostle" (43,833).
- 4th No. 446 Spence, Andrew, Commieston, Montrose, "Commieston Roland 2nd" (43,601).
- V No. 445 Sinclair, David, Loirston, Nigg, Aberdeen, "Royal Herakke" (44,741 P.I.).



## FAT CATTLE.

*PRESIDENT'S CHAMPION MEDAL for best Fat Animal.*

No. 454 Macbeth, W. Gilchrist, of Dunira, Comrie (Aberdeen-Angus).  
 "Ernie of Dunira" (87,371).

*Reserve*—No. 459 Gourlay, Francis N. M., Kirkland, Tynron, Dumfriesshire (Galloway), "Girl Guide 2nd" (Dun) (35,799).

**CLASS 56. BULLOCK**, any pure breed or cross, born on or after 1st December, 1932, and before 1st December 1933.—PREMIUMS, £7 and £3.

1st No. 449 Dunecht Estates, Ltd., Dunecht Home Farms, Dunecht, Aberdeenshire (Shorthorn Bull—Aberdeen-Angus Cow), "Jock."

2nd No. 447 Booth, James D., Dens, Peterhead (Aberdeen-Angus Cross Bull—Aberdeen-Angus Cow), "Buchan Stamp."

**CLASS 57. BULLOCK**, any pure breed or cross, born on or after 1st December 1933.—PREMIUMS, £7 and £3.

1st No. 454 Macbeth, W. Gilchrist, of Dunira, Comrie (Aberdeen-Angus), "Ernie of Dunira" (87,371).

2nd No. 451 Booth, James D., Dens, Peterhead (Aberdeen-Angus), "Buchan's Bellman."

V No. 455 Paterson, Robert Jardine, Balgray, Lockerbie (Galloway).

H No. 450 Booth, James C., Downiehill, Peterhead (Aberdeen-Angus), "Sandy."

C No. 452 Dunecht Estates, Ltd., Dunecht Home Farms, Dunecht, Aberdeenshire (Aberdeen-Angus Bull—Aberdeen-Angus/Shorthorn Cow), "Bill."

**CLASS 58. HEIFER**, any pure breed or cross, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £7 and £3.

1st No. 459 Gourlay, Francis N. M., Kirkland, Tynron, Dumfriesshire (Galloway), "Girl Guide 2nd" (Dun) (35,799).

2nd No. 458 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline (Aberdeen-Angus), "Erantica of Broomhall" (102,415).

V No. 456 Booth, James D., Dens, Peterhead (Aberdeen-Angus Bull—Aberdeen-Angus/British Friesian Cow), "Beatrice."

H No. 457 Carruthers, Lieut.-Colonel F. J., of Dormont, Lockerbie (Galloway), "Maggie."

**CLASS 59. HEIFER**, any pure breed or cross, born on or after 1st December 1933.—PREMIUMS, £7 and £3.

1st No. 463 Rhind, Alexander, Hatton, Kinloss, Moray (Aberdeen-Angus Bull—Cross-bred Cow), "Jean."

2nd No. 460 Booth, James D., Dens, Peterhead (Aberdeen-Angus Bull—Shorthorn Cow), "Frances."

- V No. 462 Forteviot, Lord, of Dupplin, Dupplin Castle, Perth (Aberdeen-Angus), "Elda of Dupplin" (105,569).  
 H No. 464 Russell, G. H., of The Burn, Glenesk, Brechin (Aberdeen-Angus Bull—Cross-bred Cow), "Black Bess."  
 C No. 461 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline (Aberdeen-Angus Bull—Shorthorn/Aberdeen-Angus Cow), "Molly."

## DAIRY COWS.

### *Special Prizes for Dairy Cows.*

COWS from Grade "A" (Tuberculin Tested) or Certified Herds, drawn from Classes 28, 38, 39, 40, 47, 48, and 49.—PREMIUMS, £10, £5, and £3.

- 1st No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 3rd" (36,868).  
 2nd No. 304 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, Fife, "Logan Mains Mary 2nd" (A 9665).  
 3rd No. 321 Howie, James, & Sons, Muirside, Dumfries, "Howie's Dairy Lass 3rd" (44,126).

# HORSES

## CLYDESDALE STALLION AND COLT.

### *PRESIDENT'S CHAMPION MEDAL for best Clydesdale Stallion or Colt.*

No. 499 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Magnificent."

*Reserve*—No. 481 Adams, David, Auchencraig, Dumbarton, "His Majesty" (22,481).

Renfrewshire Perpetual Gold Challenge Cup, value £250, for best Clydesdale Stallion or Colt. "Extra Stock" eligible to compete. This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the county of Renfrew in 1913.

No. 499 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Magnificent."

*Reserve*—No. 481 Adams, David, Auchencraig, Dumbarton, "His Majesty" (22,481).

Cawdor Challenge Cup, value 50 Guineas, for best Clydesdale Stallion or Colt. "Extra Stock" eligible to compete. This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland.

No. 499 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Magnificent."

*Breeder of best Male Animal of any age in Classes 60 to 63 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 499 Dalziel, Robert, Rue, Auldgirth.

### **CLASS 60. STALLION, born before 1932.—** PREMIUMS, £20, £15, £10, and £4.

1st No. 466 Kilpatrick, James, Hawkrigg House, Wigtown, Cumberland, "Hawkrigg Eldorado" (22,138).

2nd No. 468 Templeton, T. & M., Sandyknowe, Kelso, "Benevolence" (21,952).

3rd No. 465 Adams, David, Auchencraig, Dumbarton, "Dunduff Knight" (21,866).

### **CLASS 61. ENTIRE COLT, born in 1932.—** PREMIUMS, £20, £15, £10, and £4.

1st No. 477 Reith, Miss E. M., Kennerty Farm, Peterculter, "Remarkable" (22,332).

2nd No. 479 Sleigh, Alexander, Mains of Tolquhon, Tarves, "Craigie Goldfinder" (22,436).

3rd No. 471 Beaton, James & Frank, Mains of Glack, Pitcaple, "Glack Ambition" (22,297).

4th No. 472 Campbell, G. & J., Gartness, Balfron, "Print's Heir" (22,503).

William Taylor Memorial Prize of £10 and Certificate to the Breeder of the best Clydesdale Colt entered in Classes 62 and 63. Given by William Taylor Memorial Committee.

No. 499 Dalziel, Robert, Rue, Auldgirth.

**CLASS 62. ENTIRE COLT, born in 1933.—**  
PREMIUMS, £20, £15, £10, and £4.

- 1st No. 481 Adams, David, Auchencraig, Dumbarton, "His Majesty" (22,481).
- 2nd No. 486 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Reformer" (22,439).
- 3rd No. 491 Templeton, T. & M., Sandyknowe, Kelso, "Hyperion" (22,483).
- 4th No. 487 Murdoch, Henry, Balgreen, Hollybush, "Balgreen Inspiration" (22,401).
- V No. 484 Clark, James, Windlaw, Carmunnock, "Windlaw Select" (22,541).
- H No. 489 Reith, Miss E. M., Kennerty Farm, Peterculter, "Larwood."
- C No. 483 Clark, Allan, Woodbank, Windygates, "Woodbank Magnet" (22,549).
- C No. 490 Roger, E. M., Haddoch, Huntly, "Bodyline" (22,410).

**CLASS 63. ENTIRE COLT, born in 1934.—**  
PREMIUMS, £15, £9, £6, and £4.

- 1st No. 499 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Magnificent."
- 2nd No. 503 Kilpatrick, James, Hawkrigg House, Wigton, Cumberland, "Hawkrigg Choice."
- 3rd No. 500 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Favourite."
- 4th No. 511 Templeton, T. & M., Sandyknowe, Kelso, "Evander."
- V No. 501 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Martin."
- H No. 508 Sharp, T. Mercer, Bardrill, Blackford, "Bardrill Royal Duke."
- C No. 509 Sleigh, A. & H., Mains of Tolquhon, Tarves, "The Baron."

**CLYDESDALE GELDING.**

Got by a Registered Clydesdale Stallion.

*PRESIDENT'S CHAMPION MEDAL for best Clydesdale Gelding.*

No. 517 Young, William, West Preston, Preston Mill, Dumfries, "Preston Willie."

*Reserve*—No. 523 Young, William, West Preston, Preston Mill, Dumfries, "Preston Jamie."

The Meiklem Gold Challenge Cup, value 110 Guineas, for best Clydesdale Gelding. Given by Mr William Meiklem, Bennoch Park, Kirkcaldy.

No. 517 Young, William, West Preston, Preston Mill, Dumfries, "Preston Willie."

*Reserve*—No. 523 Young, William, West Preston, Preston Mill, Dumfries, "Preston Jamie."

**CLASS 64. GELDING, born before 1932.—**  
**PREMIUMS, £15, £9, £6, and £4.**

- 1st No. 517 Young, William, West Preston, Preston Mill, Dumfries,  
 "Preston Willie."  
 2nd No. 514 Greig, Messrs, Housenrigg, Brayton, Aspatia, "Fashion."  
 3rd No. 515 Mutter, Howey, & Co., Ltd., 51-53 Charlotte Street, Aberdeen,  
 "Jock."  
 4th No. 513 Corporation of Aberdeen Cleansing Department, Poynermook  
 Road, Aberdeen, "Bon-Accord."  
 V No. 516 Townson, John, & Sons, Wackerfield Hall, Staindrop,  
 Darlington, "Jock."

**CLASS 65. GELDING, born in 1932.—**  
**PREMIUMS, £15, £9, £6, and £4.**

- 1st No. 523 Young, William, West Preston, Preston Mill, Dumfries,  
 "Preston Jamie."  
 2nd No. 521 Murdoch, James, Netherton, Renfrew, "Supreme."  
 3rd No. 519 Greig, Messrs, Housenrigg, Brayton, Aspatia, "Baird."  
 4th No. 518 Anderson, Sir Kenneth S., Bart., K.C.M.G., The Yair,  
 Galashiels, "Douglas."  
 V No. 520 Murdoch, James, Netherton, Renfrew, "Bruchag."  
 H No. 522 Sharp, T. Mercer, Bardrill, Blackford, "Tom."

**CLASS 66. GELDING, born in 1933.—**  
**PREMIUMS, £15, £9, £6, and £4.**

- 1st No. 528 Young, William, West Preston, Preston Mill, Dumfries,  
 "Preston Tom."  
 2nd No. 527 Wilson, William, Blackbyres, Barrhead, "Gavin."  
 3rd No. 525 Greig, Messrs, Housenrigg, Brayton, Aspatia, "Johnnie."  
 4th No. 529 Young, William, West Preston, Preston Mill, Dumfries,  
 "Preston Thomas."

**CLASS 67. GELDING, born in 1934.—**  
**PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 531 Gray, John, Jun., Ardlaw Mains, Fraserburgh, "Peter."  
 2nd No. 532 Wilson, William, Blackbyres, Barrhead, "Davie."

**CLYDESDALE MARE AND FILLY.**

**PRESIDENT'S CHAMPION MEDAL**  
*for best Clydesdale Mare or Filly.*

- No. 539 Adams, David, Auchencraig, Dumbarton, "Powerful Link"  
 (58,789).  
*Reserve*—No. 545 M'Dowall, George, Briarbrae, Stranraer, Filly,  
 "Lucinda."

Cawdor Challenge Cup, value 50 Guineas, *for best Clydesdale Mare or Filly.*  
*"Extra Stock" eligible to compete.* This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland.

- No. 539 Adams, David, Auchencraig, Dumbarton, "Powerful Link"  
 (58,789).

**CLASS 68.** MARE, of any age, with Foal at foot, or due to foal before 31st July 1935.—PREMIUMS, £20, £12, £7, and £4.

- 1st No. 534 Cheyne, Andrew M., Inchgreen, New Deer, "Burnside Love" (58,179).  
 2nd No. 537 Park, Misses J. & M., Brunstane, Portobello, "Lindoris" (59,049).  
 3rd No. 535 Dalziel, Lord, P.C., Borgue House, Kirkcudbright, "Belle o' Borgue."  
 4th No. 536 Mackenzie, John, Balmain, Conon Bridge, Ross-shire, "Emeline."

*EXTRA STOCK.*

The following was awarded a Premium of £10 :—

- No. 539 Adams, David, Auchencraig, Dumbarton, "Powerful Link" (58,789).

**CLASS 69.** YELD MARE, born before 1932.—  
 PREMIUMS, £15, £9, £6, and £4.

- 1st No. 540 Reith, Miss E. M., Kennerty Farm, Peterculter, "Kennerty Sunrise" (60,100).  
 2nd No. 541 Sleigh, John P., & Sons, St John's Wells, Fyvie, "Linda."

**CLASS 70.** YELD MARE or FILLY, born in 1932.—  
 PREMIUMS, £15, £9, £6, and £4.

- 1st No. 545 M'Dowall, George, Briarbrae, Stranraer, Filly, "Lucinda."  
 2nd No. 551 Sleigh, John P., & Sons, St John's Wells, Fyvie, Filly, "Marie."  
 3rd No. 543 Goldie, David, Barassie Farm, Troon, Mare, "Barassie Winifred."  
 4th No. 542 Dalziel, Lord, P.C., Borgue House, Kirkcudbright, Mare, "Queen o' Borgue."  
 V No. 544 Kerr, J. E., of Harviestoun, Dollar, Filly, "Harviestoun Felicity."  
 H No. 546 MacKay, Robert, Bruchag Farm, Rothesay, Mare, "Lady Jean."  
 C No. 550 Rhind, Alexander, Hatton, Kinloss, Moray, Filly, "Surprise."

**CLASS 71.** FILLY, born in 1933.—  
 PREMIUMS, £15, £9, £6, and £4.

- 1st No. 554 Dalziel, Robert, Rue, Auldgirth, "Rue Perfect Lady."  
 2nd No. 561 Murdoch, Henry, Balgreen, Hollybush, "Balgreen Flash Girl."  
 3rd No. 566 Taylor, Robert, Milton Hall, Brampton Junction, Cumberland, "Lady Inverclyde."  
 4th No. 557 Gray, James, West Newhall, Kingsbarns, "Crawfordston Liz."  
 V No. 552 Adams, David, Auchencraig, Dumbarton, "Christine."  
 H No. 562 Paterson, William, Coldoch Farm, Blair Drummond, "Flora Macdonald."  
 C No. 558 Gray, John, Jun., Ardlaw Mains, Fraserburgh, "Benella."

**CLASS 72. FILLY, born in 1934.—**  
**PREMIUMS, £15, £9, £6, and £4.**

- 1st No. 574 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie Britannia."  
 2nd No. 568 Aitkenhead, Walter A., Haining Valley, Linlithgow.  
 3rd No. 580 Roger, E. M., Haddoch, Huntly, "Haddoch Princess Marina."  
 4th No. 581 Taylor, Robert, Milton Hall, Brampton Junction, Cumberland, "Milton Marina."  
 V No. 571 Grant, Captain W. Smith, M.C., Minmore, Glenlivet, "Minmore Queen."  
 H No. 570 Glashen, James G., The Hill, Milltimber, "Marina."

## HUNTERS.

*PRESIDENT'S CHAMPION MEDAL*  
*for best Hunter. (Classes 73 to 78.)*

No. 603 Cross, Donald, Knockdon, Maybole, Gelding, "Take Time."

*Reserve*—No. 587 Buchanan-Jardine, Sir John William, of Castle Milk, Bart., Castle Milk, Lockerbie, Gelding, "Hasty Bob" (1694).

Dumfries Centenary Silver Challenge Cup, value £100, *for best Hunter. "Extra Stock" not eligible to compete.* Presented by members of the Dumfriesshire Hunt in 1930 to commemorate the centenary of the Highland Society's first Show at Dumfries in 1830.

No. 603 Cross, Donald, Knockdon, Maybole, Gelding, "Take Time."

**CLASS 73. HUNTER BROOD MARE, with Foal at foot, or due to foal before 31st July 1935.—PREMIUMS, £15, £7, and £3.**

- 1st No. 584 Duguid, Miss H. M., Manar, Inverurie, "Belinda."  
 2nd No. 586 Thompson, George, Pitmedden House, Dyce, "Fidelity" (7343).  
 3rd No. 583 Duguid, Miss H. M., Manar, Inverurie, "Song Bird."  
 V No. 585 Ritchie, Miss A. R., Netherley House, Stonehaven, "Betty."

*Best Hunter Filly, entered in Classes 74 to 76, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award*—Champion Gold Medal, value £5. Given by the Hunters' Improvement and National Light Horse Breeding Society.

No. 597 Steel, Captain J., Kirkwood, Lockerbie, Filly, "Speedway" (8203).

*Reserve*—No. 590 Roberts, J. D., Strathallan Castle, Auchterarder, Filly, "Denrose" (8211).

**CLASS 74.** YELD MARE, FILLY, or GELDING, born in 1932—  
*in hand*.—PREMIUMS, £10, £5, and £3.

- 1st No. 587 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, Gelding, "Hasty Bob" (1694).  
2nd No. 590 Roberts, J. D., Strathallan Castle, Auchterarder, Filly,  
"Denrose" (8211).  
3rd No. 588 Currie, Miss Thomson, Clatto, Cupar, Fife, Filly, "Delphi-  
nium" (7937).  
V No. 591 Sanderson, J. Martin, Linthill, Melrose, Filly, "Merry"  
(7987).  
H No. 589 Dodgson, Miss, Coulmore, Kessock, Inverness, Filly,  
"Marina."  
C No. 592 Webster, Miss E. Ruth, Ashbrook, Arbroath, Gelding,  
"Askalon."

**CLASS 75.** YELD MARE, FILLY, or GELDING, born in 1933—  
*in hand*.—PREMIUMS, £10, £5, and £3.

- 1st No. 597 Steel, Captain J., Kirkwood, Lockerbie, Filly, "Speedway"  
(8203).  
2nd No. 596 Roberts, J. D., Strathallan Castle, Auchterarder, Gelding,  
"Rosalion."  
3rd No. 593 Cheape, Brig.-General R., C.M.G., D.S.O., M.C., of Wellfield,  
Gateside, Fife, Filly, "Quaint."  
V No. 594 Currie, Miss Thomson, Clatto, Cupar, Fife, Gelding,  
"Timothy."

**CLASS 76.** FILLY, COLT, or GELDING, born in 1934—  
*in hand*.—PREMIUMS, £10, £5, and £3.

- 1st No. 598 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, Gelding, "Gingerbread II."  
(1896).  
2nd No. 599 Currie, Miss Thomson, Clatto, Cupar, Fife, Filly, "Mill-  
bridge."  
3rd No. 600 Duguid, Miss H. M., Manar, Inverurie, Filly, "Faith's  
Flight."  
V No. 601 Wright, Mrs Dora E., Viewfield House, Aberdeen, Filly,  
"Jane."

**CLASS 77.** MARE or GELDING, born before 1931, to carry 14 stone  
and over—*in saddle*.—PREMIUMS, £15, £10, and £5.

- 1st No. 603 Cross, Donald, Knockdon, Maybole, Gelding, "Take Time."  
2nd No. 607 Taylor, Joseph, Moss Hall, Stretton, Warrington, Gelding,  
"Flying Ace."  
3rd No. 605 Rogers, Captain C. R. de Warrenne, D.S.O., Tilliehashlach,  
Monymusk, Gelding, "Zenny's Pride."  
V No. 608 Tullis, George, George Hotel Stables, Kirkcaldy, Gelding,  
"Rookery Nook."  
H No. 604 Davidson, Lessel, 22 Forest Road, Aberdeen, Gelding,  
"Dark Knight."  
C No. 606 Sanderson, J. Martin, Linthill, Melrose, Gelding, "Gay-  
brook."  
C No. 602 Blackwood, Patrick, Balgreen, Mid-Calder, Midlothian,  
Gelding, "Sam."



**CLASS 78.** MARE or GELDING, born before 1931, to carry 12 stone 7 lb. and under 14 stone—in *saddle*.—PREMIUMS, £15, £10, and £5.

- 1st No. 614 Rogers, Captain C. R. de Warrenne, D.S.O., Tilliehashlach, Monymusk, Mare, "Free Choice."  
 2nd No. 609 Blane, Miss, Altan Donn, Nairn, Gelding, "Silver II."  
 3rd No. 612 Duguid, Miss E. F. M., Manar, Inverurie, Mare, "Veerena" (6789).  
 V No. 611 Dawson, Miss Isobel, 21 Rubislaw Den North, Aberdeen, Gelding, "Twilight."  
 H No. 610 Dawson, Miss Isobel, 21 Rubislaw Den North, Aberdeen, Gelding, "Cock o' the North II."

**CLASS 79.** HACK of HUNTER TYPE, born in or before 1931, over 14.2 hands and not exceeding 15.2 hands—in *saddle*.—PREMIUMS, £8, £5, and £3.

- 1st No. 617 Fuller-Maitland, Mrs, Frendraught House, Huntly, Mare, "Sherry."  
 2nd No. 616 Falconer, Miss Mary E., Roscobie, Banchory, Gelding, "Michael."  
 3rd No. 615 Duguid, Miss E. F. M., Manar Inverurie, Gelding, "Nobody Knows."

## HIGHLAND AND WESTERN ISLAND PONIES.

*PRESIDENT'S CHAMPION MEDAL*  
*for best Highland or Western Island Pony (Classes 80 to 84).*

No. 633 Mackenzie, Miss Kathleen, Glen Kyllachy, Tomatin, Inverness-shire, Mare, "Strianach of Farr" (6069).

*Reserve*—No. 620 Macbeth, W. Gilchrist, of Dunira, Comrie, "Creag Liath" (1821).

Kinmonth Perpetual Gold Challenge Quaich *for best Highland or Western Island Pony*. This Quaich—along with a sum of money to provide a miniature replica in silver annually—is presented by Mrs Moncrieff Wright, Kinmonth, Bridge of Earn, in memory of her husband, the late John Moncrieff Wright of Kinmonth.

No. 633 Mackenzie, Miss Kathleen, Glen Kyllachy, Tomatin, Inverness-shire, Mare, "Strianach of Farr" (6069).

Special Prize of £8 given by Highland Pony Society *for best Male Animal not exceeding 14.2 hands, entered in Classes 80, 81, and 85. "Extra Stock" not eligible to compete. Competition to be strictly confined to animals passed sound and free from hereditary disease.*

No. 620 Macbeth, W. Gilchrist, of Dunira, Comrie, "Creag Liath" (1821).

Special Prize of £5 *for best Stallion entered in Class 80. "Extra Stock" eligible to compete.* Given by the National Pony Society.

No. 620 Macbeth, W. Gilchrist, of Dunira, Comrie, "Creag Liath" (1821).

**CLASS 80.** STALLION, born before 1933, not exceeding 14.2 hands.—  
PREMIUMS, £8, £5, £3, and £2.

- 1st No. 620 Macbeth, W. Gilchrist, of Dunira, Comrie, "Creag Liath"  
(1821).  
2nd No. 619 Campbell, Colin, Shiel, Glenshiel, Ross-shire, "Ben Clebrig"  
(1932).  
3rd No. 621 Mackelvie, Donald, New Lanark, Lamlash, Isle of Arran,  
"Gleann" (1931).

Special Prize of £5 for best *Entire Colt entered in Class 81*. Given by the  
National Pony Society.

- No. 623 Sharp, Miss E. C., Balmuir, Dundee, "Alt-an-Buidhe of Dal-  
naglar."

**CLASS 81.** ENTIRE COLT, born on or after 1st January 1933, not  
exceeding 14.2 hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 623 Sharp, Miss E. C., Balmuir, Dundee, "Alt-an-Buidhe of  
Dalnaglar."  
2nd No. 626 Wright, Major D. G. Moncrieff, M.C., Elcho Park, Rhynd,  
Perth, "Rhynd Laddie" (1930).  
3rd No. 622 Honeyman, Mrs. Derculich, Strathtay, Perthshire, "Jester  
of Derculich" (1893).  
H No. 624 Sharp, Miss E. C., Balmuir, Dundee, "Calum of Dalnaglar."  
C No. 625 Webster, Miss E. Ruth, Ashbrook, Arbroath, "Gille Ian."

Special Prize of £8 given by Highland Pony Society for best *Female Animal  
not exceeding 14.2 hands, entered in Classes 82, 83, and 84. "Extra  
Stock" not eligible to compete. Competition to be strictly confined to  
animals passed sound and free from hereditary disease.*

- No. 633 Mackenzie, Miss Kathleen, Glen Kyllachy, Tomatin, Inverness-  
shire, Mare, "Strianach of Farr" (6069).

**CLASS 82.** MARE, any age, not exceeding 14.2 hands, with Foal at  
foot, or due to foal before 31st July 1935.—PREMIUMS, £8, £5, £3,  
and £2.

- 1st No. 629 Macbeth, W. Gilchrist, of Dunira, Comrie, "Queenie XI."  
(6297).  
2nd No. 627 Blair, Mrs A. J., Beananach, Strathyre, Perthshire, "Kirsty  
of Beananach."  
3rd No. 628 Honeyman, Mrs. Derculich, Strathtay, Perthshire, "Mari-  
gold of Derculich" (6470).

**CLASS 83.** YELD MARE or FILLY, born before 1933, not exceeding  
14.2 hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 633 Mackenzie, Miss Kathleen, Glen Kyllachy, Tomatin, Inver-  
ness-shire, Mare, "Strianach of Farr" (6069).  
2nd No. 631 Honeyman, Mrs. Derculich, Strathtay, Perthshire, Mare,  
"Iolaire" (5944).  
3rd No. 632 Macbeth, W. Gilchrist, of Dunira, Comrie, Mare, "White  
Spot" (5915).

**CLASS 84.** FILLY, born on or after 1st January 1933, not exceeding 14.2 hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 637 Wright, Major D. G. Moncrieff, M.C., Elcho Park, Rhynd, Perth, "Fiona of Kinmonth" (6573).  
 2nd No. 635 Honeyman, Mrs. Derculich, Strathtay, Perthshire, "Mariposa of Derculich" (6612).  
 3rd No. 638 Wright, Major D. G. Moncrieff, M.C., Elcho Park, Rhynd, Perth, "Flora of Kinmonth" (6701).  
 4th No. 636 Montrose, The Duchess of, Home Farm, Brodick, Isle of Arran, "Isle of Arran Catrina" (6702).

**CLASS 85.** GELDING, born before 1933, not exceeding 14.2 hands.—PREMIUMS, £6, £4, and £2.

- 1st No. 639 Sharp, Miss E. C., Balmuir, Dundee, "Rory of Dalnaglar."

## SHETLAND PONIES.

(ALL SHOWN IN HAND.)

*PRESIDENT'S CHAMPION MEDAL for best Shetland Pony.*

No. 663 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pixie."

*Reserve*—No. 641 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).

*Best Group of Shetland Ponies, drawn from the ordinary Classes, consisting of one male and two females—£10.* Given by the Shetland Pony Stud-Book Society.

Nos. 641, 650, 657 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen.

*Silver Medal for the best Shetland Pony of the sex opposite to that of the winner of the President's Medal, entered or eligible for entry in the Shetland Pony Stud-Book.* Given by the Shetland Pony Stud-Book Society.

No. 641 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).

**CLASS 86.** STALLION, not exceeding 10½ hands, born before 1932.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 641 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).  
 2nd No. 640 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Embryo of Earlsall" (1245).  
 3rd No. 643 Mungall, William, of Transy, Dunfermline, "Sophimore of Transy" (1323).  
 4th No. 644 Mungall, William, of Transy, Dunfermline, "Berve of Transy."  
 V No. 642 Macbeth, W. Gilchrist, of Dunira, Comrie, "Rebel of Earlsall."

**CLASS 87. ENTIRE COLT**, not exceeding 10½ hands, born in 1932 or 1933.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 645 Butter, Misses J. & M., Cluniemore, Pitlochry, "Balmohr Nick."
- 2nd No. 649 Mungall, William, of Transy, Dunfermline, "Satyr of Transy."
- 3rd No. 648 Macbeth, W. Gilchrist, of Dunira, Comrie, "Ranger of Earlsall."
- 4th No. 646 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Golden Cap."
- V No. 647 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Haberdasher of Parkhill."

**CLASS 88. MARE**, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1935.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 650 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Valetta of Maryfield" (4482).
- 2nd No. 651 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Golden Wing of Maryfield."
- 3rd No. 653 Mungall, William, of Transy, Dunfermline, "Sunbeam of Transy" (4353).
- 4th No. 654 Mungall, William, of Transy, Dunfermline, "Helene of Transy" (4520).
- V No. 652 Macbeth, W. Gilchrist, of Dunira, Comrie, "Agnes of Earlsall" (4548).

**CLASS 89. YELD MARE**, not exceeding 10½ hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 657 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Thora of Maryfield" (4228).
- 2nd No. 660 Mungall, William, of Transy, Dunfermline, "Stelmone of Transy."
- 3rd No. 655 Clark, Graham, Ashbank, Maberly Street, Aberdeen, "Ladybird of Maryfield."
- 4th No. 659 Macbeth, W. Gilchrist, of Dunira, Comrie, "Elderflower II. of Earlsall" (4604).
- V No. 656 Clark, Graham, Ashbank, Maberly Street, Aberdeen, "Golden Dawn of Maryfield."
- H No. 661 Ritchie, Miss A. R., Netherley House, Stonehaven, "Precious of Netherley."
- C No. 658 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Senette."

**CLASS 90. FILLY**, not exceeding 10½ hands, born in 1932 or 1933.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 663 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pixie."
- 2nd No. 662 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Biddy of Manar."
- 3rd No. 664 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pearl."
- 4th No. 665 Macbeth, W. Gilchrist, of Dunira, Comrie, "Amelia of Dunira."

## SADDLE CLASSES.

**CLASS 91.** MARE or GELDING, any age, over 13 hands, and not exceeding 14.2 hands—*in saddle*.—PREMIUMS, £5, £3, and £2.

- 1st No. 667 Buchan, Miss M. S. F., Manar, Inverurie, Mare, "Dauntless."  
 2nd No. 670 Patrick, Cargill L., Station Stables, Cupar, Fife, Gelding, "Nipper."  
 3rd No. 668 Duguid, Miss H. M., Manar, Inverurie, Mare, "Chesca."  
 V No. 666 Bookless, Miss Eileen, Brookden, Murtle, Aberdeenshire, Mare, "Bubbles."

**CLASS 92.** MARE or GELDING, any age, not exceeding 13 hands—*in saddle*.—PREMIUMS, £5, £3, and £2.

- 1st No. 672 Dawson, Miss Isobel, 21 Rubislaw Den North, Aberdeen, Mare, "Felicity Anne."  
 2nd No. 675 Lydall, Miss Margaret, Williamston Home Farm, Inch, Mare, "Taffy."  
 3rd No. 671 Blane, Miss, Altan Donn, Nairn, Gelding, "Swift."  
 V No. 674 Duguid, Miss H. M., Manar, Inverurie, Mare, "Starlight."  
 H No. 673 Duguid, Miss H. M., Manar, Inverurie, Mare, "Topsy"

## HACKNEYS IN HARNESS.

**CLASS 93.** }  
**CLASS 94.** } (Cancelled owing to insufficient entries—Regulation 12.)  
**CLASS 95.** }

## HORSES IN HARNESS.

**CLASS 96.** DRAUGHT GELDING, any age, in Harness, shown in Cart or Lorry (and driven by single driver), it being a condition that the Horse must have been regularly worked for a period of 12 weeks prior to the first day of the Show.—PREMIUMS, £10, £5, £3, £2, and £1.

- 1st No. 3 Mutter, Howey, & Co., Ltd, 51 and 53 Charlotte Street, Aberdeen.  
 2nd No. 2 Mutter, Howey, & Co., Ltd., 51 and 53 Charlotte Street, Aberdeen.  
 3rd No. 1 Aberdeen Corporation Cleansing Department, Poynerbrook Road, Aberdeen, "Rob."  
 4th No. 5 Wordie & Co., Ltd., 125 Buchanan Street, Glasgow, "Sandy."  
 5th No. 6 Wordie & Co., Ltd., 125 Buchanan Street, Glasgow, "Jock."  
 V No. 7 Wordie & Co., Ltd., 125 Buchanan Street, Glasgow, "Wallace."  
 H No. 4 Wordie & Co., Ltd., 125 Buchanan Street, Glasgow, "Prince."

**CLASS 97.** HORSE, any age, in Harness, shown in Van or Light Lorry, it being a condition that the Horse must have been regularly worked for a period of 12 weeks prior to the first day of the Show.—PREMIUMS, £8, £5, and £3.

- 1st No. 2 Beattie, William, Ltd., 116 Paton Street, Glasgow, Gelding, "Black Prince."  
 2nd No. 10 Northern Co-operative Society, Ltd., Millbank, Berryden Road, Aberdeen, Gelding, "Bushboy."  
 3rd No. 5 Northern Co-operative Society, Ltd., Millbank, Berryden Road, Aberdeen, Gelding, "Alness."  
 V No. 6 Northern Co-operative Society, Ltd., Millbank, Berryden Road, Aberdeen, Mare, "Daisy."  
 H No. 7 Northern Co-operative Society, Ltd., Millbank, Berryden Road, Aberdeen, Mare, "Dandy."  
 C No. 1 Aberdeen Corporation Cleansing Department, Poynernook Road, Aberdeen, Gelding, "Peter."  
 C No. 3 Beattie, William, Ltd., 116 Paton Street, Glasgow, Gelding, "Jubilee."  
 C No. 4 Mutter, Howey, & Co., Ltd., 51 and 53 Charlotte Street, Aberdeen.  
 C No. 9 Northern Co-operative Society, Ltd., Millbank, Berryden Road, Aberdeen, Mare, "Polly."  
 C No. 11 Reith, John, Kennerty Farm Dairy, 46-48 Rose Street, Aberdeen, Mare, "Nellie."  
 C No. 12 Reith, John, Kennerty Farm Dairy, 46-48 Rose Street, Aberdeen, Gelding, "Bob."

## JUMPING COMPETITIONS.

Champion Prize of £10 for most points in Prizes with one Horse in Classes 1, 3, and 5.

CONDITIONS.—First Prize to count five points; Second Prize, four points; Third Prize, three points; Fourth Prize, two points; Fifth Prize, one point. The money to be evenly divided in the event of a tie.

Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Pom Pom" (9½ points).

**CLASS 1.** HORSE or PONY, any height.—  
 PREMIUMS, £20, £15, £10, £5, and £3.

- |     |         |   |  |
|-----|---------|---|--|
| 1st | } equal | { | Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Pom Pom."                        |
| 2nd |         |   | Brown, Miss Margaret, Westerton, Killearn, Mare, "Silver Mist."                          |
| 3rd | } equal | { | Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare, "Plain Jane."                     |
| 4th |         |   | Grange Bros., Alvaston, Nantwich, Gelding, "Dawn."                                       |
| 5th | } equal | { | Barrie, Jack, Pollok Riding Academy, 82 Dumbreck Road, Glasgow, Gelding, "Commissioner." |
|     |         |   | Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Binny."                          |

**CLASS 2.** HORSE or PONY, any height, confined to competitors permanently resident in Scotland. The Horse or Pony to have been the property of the competitor since 1st May 1935.—PREMIUMS, £10, £8, £5, £3, and £2.

- 1st Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare, "Plain Jane."  
 2nd Snodgrass, A. J., Kippilaw, Dalkeith, Gelding, "Moses."  
 3rd Alexander, Thomas, Dalmorglen Park, Stirling, Gelding, "Irish."  
     (Rae, Alexander, Rubislaw Riding School, Aberdeen, Mare,  
 4th } equal "Sorrel."  
 5th } equal Robertson, A. D., Langton, Laurieston, Falkirk, Gelding,  
     "Cockleroi."

**CLASS 3.** HORSE or PONY, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the First Prize, and 4 inches for the winner of the Second Prize in Class 1.—PREMIUMS, £20, £15, £10, £5, and £3.

- 1st } equal { Grange Bros., Alvaston, Nantwich, Gelding, "Found."  
 2nd } equal { Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare,  
 3rd } equal { "Binny."  
     Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare,  
     "Plain Jane."  
     (Robertson, A. D., Langton, Laurieston, Falkirk, Gelding,  
     "Cockleroi."  
 4th } equal { Taylor, Joseph, Moss Hall, Stretton, Warrington, Gelding,  
 5th } equal { "Flying Ace."  
     Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare,  
     "Pom Pom."

**CLASS 4.** HORSE or PONY, any height.—  
 PREMIUMS, £10, £8, £5, £3, and £2.

- 1st } equal { Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare,  
 2nd } equal { "Pom Pom."  
 3rd } equal { Blackwood, Patrick, Balgreen, Midcalder, Gelding, "Sam."  
     Patrick, Cargill L., Station Stables, Cupar, Gelding,  
     "Nipper."  
     Trotter, G. R., Royal Scots Greys, Redford Barracks,  
     Edinburgh, Mare, "Olga."  
     Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare,  
     "Plain Jane."  
 4th } equal { Brown, Miss Margaret, Westerton, Killearn, Mare, "Silver  
 5th } equal { Mist."  
     Robertson, A. D., Langton, Laurieston, Falkirk, Gelding,  
     "Cockleroi."

**CLASS 5.** HORSE or PONY, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the First Prize, and 4 inches for the winner of the Second Prize in either of Classes 1 or 3—4 inches extra for the winner of the two First Prizes in Classes 1 and 3.—PREMIUMS, £15, £10, £5, £3, and £2.

- 1st Grange Bros., Alvaston, Nantwich, Gelding, "Found."  
 2nd Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Pom Pom."  
 3rd Bradley, Ernest, Newton Grange, Great Ayton, Mare, "Kitty."  
     (Robertson, A. D., Langton, Laurieston, Falkirk, Gelding,  
 4th } equal "Cockleroi."  
 5th } equal Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare,  
     "Plain Jane."

# SHEEP

## BLACKFACE.

### PRESIDENT'S CHAMPION MEDAL for best Blackface Sheep.

No. 679 Rosebery, The Earl of, D.S.O. (Rosebery Estates), Moorfoot Farm, Gorebridge, Midlothian, "Sentinel."

Reserve—No. 690 Paton, Robert C., Lettre, Killearn, "Britannia."

Silver Challenge Cup, value £50, for best Group of Three Blackface Sheep, consisting of Ewe, Gimmer, and Ewe Lamb, drawn from Classes 102 to 104. "Extra Stock" eligible to compete. Presented by Mr and Mrs Francis A. Rottenburg, Lochlane, Crieff.

Nos. 750, 767, 784 Rottenburg, F. A., of Lochlane, Crieff.

The "James Archibald" Prize, of about £20, for the best Sheep in the Blackface Classes (excluding Lambs). "Extra Stock" eligible to compete. This Prize consists of the annual free income from a fund of £600, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overshiels, Stow.

No. 679 Rosebery, The Earl of, D.S.O. (Rosebery Estates), Moorfoot Farm, Gorebridge, Midlothian, "Sentinel."

### CLASS 98. TUP, three Shear and over.— PREMIUMS, £12, £8, £4, and £2.

- 1st No. 679 Rosebery, The Earl of, D.S.O. (Rosebery Estates), Moorfoot Farm, Gorebridge, Midlothian, "Sentinel."
- 2nd No. 676 Hamilton, Matthew G., Woolfords, Cobbinshaw, "Better Times."
- 3rd No. 678 Lindsay, Thomas, Ascreavie, Kirriemuir.
- 4th No. 677 Hamilton, Matthew G., Woolfords, Cobbinshaw.

### CLASS 99. TUP, two Shear.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 690 Paton, Robert C., Lettre, Killearn, "Britannia."
- 2nd No. 681 Black, J. Belfrage, Holton, Milnathort.
- 3rd No. 685 Hamilton, Matthew G., Woolfords, Cobbinshaw.
- 4th No. 682 Black, J. Belfrage, Holton, Milnathort.
- V No. 688 Macfarlane, James, Steps of Cally, Blairgowrie, "Stepping Stone."
- H No. 686 Knox-Fletcher, James, Linthills, Lochwinnoch, Renfrewshire.
- C No. 684 Hamilton, Matthew G., Woolfords, Cobbinshaw.



**CLASS 100. SHEARLING TUP.**—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 699 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 2nd No. 722 Vickers, T. L., Troloss, Elvanfoot, Lanarkshire, and Joshua Murray, Corsebank, Sanquhar, "Security."  
 3rd No. 692 Black, J. Belfrage, Holton, Milnathort.  
 4th No. 700 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 V No. 709 Lindsay, William, Balintore, Kirriemuir.  
 H No. 713 Macfarlane, James, Steps of Cally, Blairgowrie.  
 C No. 721 Vickers, T. L., Troloss, Elvanfoot, Lanarkshire, "Carry on."  
 C No. 696 Cayley, Arthur, Carham, Coldstream.  
 C No. 710 Lindsay, William, Balintore, Kirriemuir.  
 C No. 703 Hamilton, Matthew G., Woolfords, Cobbinshaw.

**CLASS 101. TUP LAMB.**—PREMIUMS, £5, £3, and £2.

- 1st No. 739 Vickers, T. L., Troloss, Elvanfoot, Lanarkshire.  
 2nd No. 737 Rottenburg, F. A., of Lochlane, Crieff.  
 3rd No. 728 Lindsay, G. D. & William, Blackbyres, Kilmarnock.  
 V No. 734 Paton, Robert C., Lettre, Killearn.  
 H No. 727 Cayley, Arthur, Carham, Coldstream.  
 C No. 724 Black, J. Belfrage, Holton, Milnathort.

**CLASS 102. EWE, above one Shear (born before 1934), with Lamb at foot.**—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 750 Rottenburg, F. A., of Lochlane, Crieff.  
 2nd No. 746 Lindsay, G. D. & William, Blackbyres, Kilmarnock.  
 3rd No. 743 Black, J. Belfrage, Holton, Milnathort.  
 4th No. 747 Lindsay, William, Balintore, Kirriemuir.  
 V No. 744 Brown, James & Thomas, Kirklandbank, Alyth.  
 H No. 749 Paton, Robert C., Lettre, Killearn.  
 C No. 745 Cayley, Arthur, Carham, Coldstream.

**CLASS 103. SHEARLING EWE or GIMMER (born in 1934).**—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 753 Anderson, G. & J., Witshaw, Sorn, Mauchline, "Bonnie Jean."  
 2nd No. 764 Macfarlane, James, Steps of Cally, Blairgowrie.  
 3rd No. 760 Lindsay, G. D. & William, Blackbyres, Kilmarnock, "Mountain Maid."  
 4th No. 763 Lindsay, William, Balintore, Kirriemuir.  
 V No. 755 Black, J. Belfrage, Holton, Milnathort.  
 H No. 765 Macfarlane, James, Steps of Cally, Blairgowrie.  
 C No. 756 Black, J. Belfrage, Holton, Milnathort.  
 C No. 757 Brown, James & Thomas, Kirklandbank, Alyth.

**CLASS 104. EWE LAMB.**—PREMIUMS, £5, £3, and £2.

- 1st No. 784 Rottenburg, F. A., of Lochlane, Crieff.  
 2nd No. 783 Rottenburg, F. A., of Lochlane, Crieff.  
 3rd No. 775 Cayley, Arthur, Carham, Coldstream.  
 V No. 776 Lindsay, G. D. & William, Blackbyres, Kilmarnock.  
 H No. 782 Rottenburg, F. A., of Lochlane, Crieff.  
 C No. 778 Macfarlane, James, Steps of Cally, Blairgowrie.  
 C No. 774 Brown, James & Thomas, Kirklandbank, Alyth.

# CHEVIOT.

## PRESIDENT'S CHAMPION MEDAL for best Cheviot Sheep.

No. 795 Elliot, Robert T., Chatto, Kelso.

Reserve—No. 812 Elliot, Arthur, Hindhope, Jedburgh.

Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best Cheviot Sheep. "Extra Stock" eligible to compete. This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 795 Elliot, Robert T., Chatto, Kelso.

## CLASS 105. TUP, above one Shear.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 789 Elliot, Arthur, Hindhope, Jedburgh.
- 2nd No. 787 Douglas, Walter S., Upper Hindhope, Jedburgh, "Jubilee."
- 3rd No. 790 Elliot, Robert T., Chatto, Kelso.
- 4th No. 786 Douglas, Walter S., Upper Hindhope, Jedburgh, "Bowmont Sensation."
- V No. 788 Elliot, Arthur, Hindhope, Jedburgh.

## CLASS 106. SHEARLING TUP.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 795 Elliot, Robert T., Chatto, Kelso.
- 2nd No. 791 Douglas, Walter S., Upper Hindhope, Jedburgh.
- 3rd No. 794 Elliot, Arthur, Hindhope, Jedburgh.
- 4th No. 796 Elliot, Robert T., Chatto, Kelso.
- V No. 793 Elliot, Arthur, Hindhope, Jedburgh.
- H No. 792 Douglas, Walter S., Upper Hindhope, Jedburgh.

## CLASS 107. TUP LAMB.—PREMIUMS, £5, £3, and £2.

- 1st No. 797 Douglas, Walter S., Upper Hindhope, Jedburgh.
- 2nd No. 800 Elliot, Robert T., Chatto, Kelso.
- 3rd No. 798 Elliot, Arthur, Hindhope, Jedburgh.
- V No. 799 Elliot, Arthur, Hindhope, Jedburgh.

## CLASS 108. EWE, above one Shear, with Lamb at foot.— PREMIUMS, £10, £5, £3, and £2.

- 1st No. 804 Elliot, Arthur, Hindhope, Jedburgh.
- 2nd No. 803 Douglas, Walter S., Upper Hindhope, Jedburgh.
- 3rd No. 806 Elliot, Robert T., Chatto, Kelso.
- 4th No. 807 Gilchrist, Walter Elliot, Newmains, Crawford, "Newmains Granny."
- V No. 809 Stephen, James A., Conglass, Inverurie.
- H No. 802 Douglas, Walter S., Upper Hindhope, Jedburgh.
- C No. 808 Stephen, James A., Conglass, Inverurie.

**CLASS 109. SHEARLING EWE or GIMMER,—**  
**PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 812 Elliot, Arthur, Hindhope, Jedburgh.  
 2nd No. 810 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 3rd No. 813 Elliot, Arthur, Hindhope, Jedburgh.  
 4th No. 811 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 V No. 814 Elliot, Robert T., Chatto, Kelso.

**CLASS 110. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 818 Elliot, Robert T., Chatto, Kelso.  
 2nd No. 815 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 3rd No. 819 Gilchrist, Walter Elliot, Newmains, Crawford, "Newmains Jubilee."  
 V No. 816 Elliot, Arthur, Hindhope, Jedburgh.

**BORDER LEICESTER.**

*PRESIDENT'S CHAMPION MEDAL*  
*for best Border Leicester Sheep.*

No. 909 Young, John, Skerrington Mains, Hurlford.

*Reserve*—No. 837 Howie, James, & Sons, Muirside, Dumfries.

The "Angus" Perpetual Silver Challenge Cup, value 50 Guineas, for the best Border Leicester Sheep. "*Extra Stock*" eligible to compete. This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 909 Young, John, Skerrington Mains, Hurlford.

Gold Medal for best Male Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "*Extra Stock*" not eligible. Given by the Society of Border Leicester Sheep Breeders.

No. 837 Howie, James, & Sons, Muirside, Dumfries.

**CLASS 111. TUP, above one Shear.—PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 820 Balfour, Colonel E. W. S., D.S.O., O.B.E., M.C., of Balbirnie, Markinch, "Hatton's £110."  
 2nd No. 822 Howie, A. B., Eshott Brocks, Felton, Morpeth, "Sandyknowe Select."  
 3rd No. 821 Cameron, R. C., Greenlawdean, Greenlaw, "Knockon" (10,182).

**CLASS 112. SHEARLING TUP.—PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 837 Howie, James, & Sons, Muirside, Dumfries.  
 2nd No. 825 Cameron, R. C., Greenlawdean, Greenlaw.  
 3rd No. 827 Cameron, R. C., Greenlawdean, Greenlaw, "C.A." (10,249).  
 4th No. 836 Howie, James, & Sons, Muirside, Dumfries.  
 V No. 826 Cameron, R. C., Greenlawdean, Greenlaw.  
 H No. 847 Young, John, Skerrington Mains, Hurlford.  
 C No. 823 Balfour, Colonel E. W. S., D.S.O., O.B.E., M.C., of Balbirnie, Markinch.  
 C No. 829 Cross, Donald, Knockdon, Maybole.  
 C No. 830 Findlay, Alexander, Hatton, Newtyle.  
 C No. 843 Moyes, James C., Renmure, Inverkeilor, Arbroath.

**CLASS 113. TUP LAMB.—PREMIUMS, £10, £5, £3, and £2.**

1st No. 864	Howie, James, & Sons, Muirside, Dumfries.
2nd No. 849	Barr, Allan, Hobsland, Monkton.
3rd No. 860	Howie, A. B., Eshott Brocks, Felton, Morpeth.
4th No. 873	Young, John, Skerrington Mains, Hurlford.
V No. 861	Howie, A. B., Eshott Brocks, Felton, Morpeth.
H No. 865	Howie, James, & Sons, Muirside, Dumfries.
C No. 852	Cardno, Messrs, Fordafourie, Fraserburgh.
C No. 853	Cochrane, Alexander, Nether Craig, Kilmarnock.
C No. 870	Taylor, Alexander W., Philorth, Fraserburgh.

Gold Medal for best Female Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "Extra Stock" not eligible. Given by the Society of Border Leicester Sheep Breeders.

No. 909 Young, John, Skerrington Mains, Hurlford.

**CLASS 114. EWE, above one Shear.—PREMIUMS, £10, £5, £3, and £2.**

1st No. 878	Cameron, R. C., Greenlawdean, Greenlaw.
2nd No. 886	Moyes, James C., Renmure, Inverkeilor, Arbroath.
3rd No. 884	Moyes, H. B., Kilmux, Leven, Fife.
4th No. 890	Young, John, Skerrington Mains, Hurlford.
V No. 883	Grant, John F., South Kingennie, Kingennie, Angus.
H No. 881	Findlay, Harry, Myreton, Dundee.
C No. 888	Piper, James, of The Grange, Burntisland.
C No. 889	Whyte, J. & J. L., Hayston, Glamis.

**CLASS 115. SHEARLING EWE or CIMMER.—  
PREMIUMS, £10, £5, £3, and £2.**

1st No. 909	Young, John, Skerrington Mains, Hurlford.
2nd No. 894	Findlay, Harry, Myreton, Dundee.
3rd No. 901	Moyes, H. B., Kilmux, Leven, Fife.
4th No. 898	Howie, James, Eglinton Mains, Irvine.
V No. 897	Howie, A. B., Eshott Brocks, Felton, Morpeth.
H No. 902	Moyes, H. B., Kilmux, Leven, Fife.
C No. 893	Findlay, Alexander, Hatton, Newtyle.
C No. 908	Young, John, Skerrington Mains, Hurlford.

**CLASS 116. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

1st No. 919	Howie, A. B., Eshott Brocks, Felton, Morpeth.
2nd No. 912	Cameron, R. C., Greenlawdean, Greenlaw.
3rd No. 910	Balfour, Colonel E. W. S., D.S.O., O.B.E., M.C., of Balbirnie, Markinch.
V No. 927	Taylor, Alexander W., Philorth, Fraserburgh.
H No. 914	Findlay, Alexander, Hatton, Newtyle.
C No. 921	Howie, James, Eglinton Mains, Irvine.
C No. 930	Young, John, Skerrington Mains, Hurlford.

**HALF-BRED.***PRESIDENT'S CHAMPION MEDAL for best Half-Bred Sheep*

No. 935 Dodds, William, Clarilaw, Melrose.

*Reserve*—No. 931 Dodds, William, Clarilaw, Melrose.

**CLASS 117. SHEARLING TUP.**—PREMIUMS, £10, £7, and £3.

(No Entry.)

**CLASS 118. EWE, above one Shear.**—PREMIUMS, £10, £5, and £2.

1st No. 931 Dodds, William, Clarilaw, Melrose.

2nd No. 932 Dodds, William, Clarilaw, Melrose.

3rd No. 933 Dodds, William, Clarilaw, Melrose.

V No. 934 Oag, William, Clatequoy, Thurso.

**CLASS 119. SHEARLING EWE or GIMMER.**—

PREMIUMS, £10, £5, and £2.

1st No. 935 Dodds, William, Clarilaw, Melrose.

2nd No. 936 Dodds, William, Clarilaw, Melrose.

3rd No. 937 Dodds, William, Clarilaw, Melrose.

**CLASS 120. EWE LAMB.**—PREMIUMS, £5, £3, and £2.

1st No. 939 Dodds, William, Clarilaw, Melrose.

2nd No. 938 Dodds, William, Clarilaw, Melrose.

3rd No. 943 Stephen, James A., Conglass, Inverurie.

V No. 941 Stephen, James A., Conglass, Inverurie.

H No. 942 Stephen, James A., Conglass, Inverurie.

**OXFORD DOWN.***PRESIDENT'S CHAMPION MEDAL for best Oxford Down Sheep.*

No. 948 Templeton, T. & M., Sandyknowe, Kelso.

*Reserve*—No. 969 Hutcheon, William M., Ordley, Auchterless.

**CLASS 121. SHEARLING TUP.**—PREMIUMS, £8, £5, and £3.

1st No. 948 Templeton, T. & M., Sandyknowe, Kelso.

2nd No. 945 Hutcheon, William M., Ordley, Auchterless, "Recovery"  
(12,607).

3rd No. 951 Willis, G. H., Birdlip, Gloucester.

V No. 949 Templeton, T. & M., Sandyknowe, Kelso.

H No. 946 Hutcheon, William M., Ordley, Auchterless.

C No. 947 Smith, William, Bogside, Auchterless, "Chieftain II."  
(12,627).

**CLASS 122. SHEARLING EWE or GIMMER.—**  
PREMIUMS, £8, £5, and £3.

- 1st No. 962 Templeton, T. & M., Sandyknowe, Kelso.
- 2nd No. 956 Hutcheon, William M., Ordley, Auchterless.
- 3rd No. 955 Hutcheon, William M., Ordley, Auchterless.
- V No. 961 Templeton, T. & M., Sandyknowe, Kelso.
- H No. 963 Willis, G. H., Birdlip, Gloucester.
- C No. 957 Hutcheon, William M., Ordley, Auchterless.

**CLASS 123. TUP LAMB.—PREMIUMS, £8, £5, and £3.**

- 1st No. 969 Hutcheon, William M., Ordley, Auchterless.
- 2nd No. 978 Templeton, T. & M., Sandyknowe, Kelso.
- 3rd No. 980 Willis, G. H., Birdlip, Gloucester.
- V No. 973 Lawson, William H., Frithfield, Anstruther.
- H No. 981 Willis, G. H., Birdlip, Gloucester.
- C No. 972 Lawson, William H., Frithfield, Anstruther.
- C No. 977 Templeton, T. & M., Sandyknowe, Kelso.

**CLASS 124. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 994 Willis, G. H., Birdlip, Gloucester.
- 2nd No. 983 Bell, John, Balbuthie, Kilconquhar.
- 3rd No. 991 Templeton, T. & M., Sandyknowe, Kelso.
- V No. 987 Lawson, William H., Frithfield, Anstruther.
- H No. 993 Willis, G. H., Birdlip, Gloucester.
- C No. 985 Hutcheon, William M., Ordley, Auchterless.
- C No. 990 Templeton, T. & M., Sandyknowe, Kelso.

**SUFFOLK.**

*PRESIDENT'S CHAMPION MEDAL for best Suffolk Sheep.*

No. 1002 Whitton, R. & W., East Nevay, Eassie, Angus, "Stetchworth Toprice."

*Reserve*—No. 1011 Rintoul, William, Pratis, Leven.

Silver Challenge Cup, value £15, offered by the Suffolk Sheep Society for best Group of Suffolk Sheep, consisting of one Tup, one shear and over, one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor—drawn from Classes 125 to 128. Given by the Suffolk Sheep Society.

Nos. 1002, 1013, 1026, 1039 Whitton, R. & W., East Nevay, Eassie, Angus.

**CLASS 125. TUP, one Shear and over.—PREMIUMS, £10, £7, and £3.**

- 1st No. 1002 Whitton, R. & W., East Nevay, Eassie, Angus, "Stetchworth Toprice."
- 2nd No. 996 Duncan, Commander J. A., Parkhill, Arbroath.
- 3rd No. 997 Duncan, Commander J. A., Parkhill, Arbroath.
- V No. 1000 Reid, John, Hillhead, Ashogle, Turriff, "Tillyfar Supreme."
- H No. 998 Fraser, George, Barmuckity, Elgin.
- C No. 1001 Rintoul, William, Pratis, Leven.

**CLASS 126. SHEARLING EWE or GIMMER.—**  
**PREMIUMS, £10, £5, and £2.**

- 1st No. 1011 Rintoul, William, Pratis, Leven.  
 2nd No. 1010 Rintoul, William, Pratis, Leven.  
 3rd No. 1005 Duncan, Commander J. A., Parkhill, Arbroath.  
 V No. 1013 Whitton, R. & W., East Nevay, Eassie, Angus.  
 H No. 1009 Johnston, W. G., & Son, Kilmundie, Glamis.  
 C No. 1006 Duncan, Commander J. A., Parkhill, Arbroath.

**CLASS 127. TUP LAMB.—PREMIUMS, £10, £5, and £2.**

- 1st No. 1026 Whitton, R. & W., East Nevay, Eassie, Angus.  
 2nd No. 1022 Johnston, W. G., & Son, Kilmundie, Glamis.  
 3rd No. 1023 Rintoul, William, Pratis, Leven.  
 V No. 1016 Duncan, Commander J. A., Parkhill, Arbroath.  
 H No. 1028 Whitton, R. & W., East Nevay, Eassie, Angus.  
 C No. 1024 Rintoul, William, Pratis, Leven.

**CLASS 128. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1039 Whitton, R. & W., East Nevay, Eassie, Angus.  
 2nd No. 1035 Rintoul, William, Pratis, Leven.  
 3rd No. 1038 Whitton, R. & W., East Nevay, Eassie, Angus.  
 V No. 1034 Johnston, W. G., & Son, Kilmundie, Glamis.  
 H No. 1032 Duncan, Commander J. A., Parkhill, Arbroath.  
 C No. 1036 Rintoul, William, Pratis, Leven.

## **DORSET HORN.**

*PRESIDENT'S CHAMPION MEDAL for best Dorset Horn Sheep.*

- No. 1048 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.

*Reserve*—No. 1047 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.

**CLASS 129. TUP, any age.—PREMIUMS, £6, £4, and £2.**

- 1st No. 1042 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.  
 2nd No. 1041 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.  
 3rd No. 1040 Bruce, Lord, Broomhall, Dunfermline.

**CLASS 130. EWE or GIMMER.—**  
**PREMIUMS, £5, £3, and £2.**

- 1st No. 1048 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.  
 2nd No. 1047 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline.  
 3rd No. 1044 Bruce, Lord, Broomhall, Dunfermline.  
 V No. 1043 Bruce, Lord, Broomhall, Dunfermline.  
 H No. 1045 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife.

# FAT SHEEP.

*PRESIDENT'S CHAMPION MEDAL for best Pen of Fat Sheep.*

No. 1054 Whitton, R. & W., East Nevay, Eassie, Angus (Suffolk).

*Reserve*—No. 1050 Blythe, Charles, & Sons, Barberfield, Haddington (Suffolk).

**CLASS 131.** THREE FAT LAMBS, any breed or cross, dropped in the year of the Show.—PREMIUMS, £5, £3, and £2.

1st	No. 1054	Whitton, R. & W., East Nevay, Eassie, Angus (Suffolk).
2nd	No. 1050	Blythe, Charles, & Sons, Barberfield, Haddington (Suffolk).
3rd	No. 1053	Hutcheon, William M., Ordley, Auchterless (Oxford Down).
V	No. 1049	Blythe, Charles, & Sons, Barberfield, Haddington (Suffolk).
H	No. 1051	Dodds, William, Clarulaw, Melrose (Suffolk).
C	No. 1052	Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline (Dorset Down).



## GOATS

### *PRESIDENT'S CHAMPION MEDAL for best Animal in the Goat Classes.*

No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British),  
"Cornish Sanssouci \*\*Q\*\*" (9940).

*Reserve*—No. 1073 Henderson, Miss M., The Riding, Hexham (British  
Toggenburg), "Riding Thistlefern" (11,549).

The Competition for Goats is recognised by the British Goat Society,  
Roydon Road, Diss, Norfolk, which will give Challenge Certificates  
(qualifying for a Championship) :—

#### *For the best Female Goat over two years that has borne a kid.*

No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British),  
"Cornish Sanssouci \*\*Q\*\*" (9940).

#### *For the best dual purpose Goat over two years that has borne a kid.*

No. 1065 Leith, Mrs R. L., Breakachy, Laggan, Kingussie (British  
Saanen), "Cornish Rayon d'Or Q\*" (10,059).

#### *A Bronze Medal for the best Female Exhibit in Classes 132 to 137 inclusive.*

No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British),  
"Cornish Sanssouci \*\*Q\*\*" (9940).

Challenge Cup, value 20 Guineas, *for the best Female Goat in the Show.*  
Given by the late Lord Dewar, London—to be competed for annually.

No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British),  
"Cornish Sanssouci \*\*Q\*\*" (9940).

### **CLASS 132. FEMALE GOAT, Toggenburg, British Toggenburg, or British Alpine, in Milk.—PREMIUMS, £3, £2, and £1.**

1st No. 1063 Forteviot, Margaret, Lady, Galloway House, Garlieston,  
Wigtownshire (British Alpine), "Dupplin Genista\*" (10,059).

2nd No. 1062 Foreviot, Margaret, Lady, Galloway House, Garlieston,  
Wigtownshire (British Toggenburg), "Dupplin Camelia" (11,130).

### **CLASS 133. FEMALE GOAT, Saanen or British Saanen, in Milk.— PREMIUMS, £3, £2, and £1.**

1st No. 1065 Leith, Mrs R. L., Breakachy, Laggan, Kingussie (British  
Saanen), "Cornish Rayon d'Or Q\*" (10,059).

2nd No. 1064 Henderson, Miss M., The Riding, Hexham (British Saanen),  
"Riding Tecla" (11,130).

**CLASS 134. FEMALE GOAT, any other variety, in Milk.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British), "Cornish Sanssouci \*\*Q\*\*" (9940).  
 2nd No. 1066 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British), "Dupplin Glider\*" (10,947).  
 3rd No. 1067 Leith, Mrs R. L., Breakachy, Laggan, Kingussie (British), "Sauchie Clara" (9778).  
 V No. 1070 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British), "Dainty of Swanston Q\*" (10,944).  
 H No. 1069 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British), "Suzannekin" (7680).

**CLASS 135. GOATLING, Toggenburg, British Toggenburg, or British Alpine, over one but not exceeding two years.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1073 Henderson, Miss M., The Riding, Hexham (British Toggenburg), "Riding Thistlefern" (11,549).  
 2nd No. 1071 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Honesty" (11,447).  
 3rd No. 1072 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Harpist" (11,449).

**CLASS 136. GOATLING, any other variety, over one but not exceeding two years.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1076 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British), "Kinneddar Elfin" (FB 569).  
 2nd No. 1074 Blair, Mrs, Blairholm Goat and Poultry Farm, Kirknewton, Midlothian (British Saanen), "Foulden Joyce" (11,404).  
 3rd No. 1075 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British), "Dupplin Huntress" (11,448).

**CLASS 137. FEMALE KID, any Variety, not exceeding one year.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1077 Dunlop, Miss I. C., Parkhurst, Park Road, Harrogate (British Toggenburg), "Marberry" (11,926).  
 2nd No. 1080 Henderson, Miss M., The Riding, Hexham (British), "Riding Taffeta" (11,928).  
 3rd No. 1079 Henderson, Miss M., The Riding, Hexham (British), "Riding Thistlefay" (11,927).  
 V No. 1078 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British), "Dupplin Iris" (11,942).

**CLASS 138. MALE KID, any Variety, not exceeding one year.—**  
**PREMIUMS, £3, £2, and £1.**

(No Entry.)

**CLASS 139. MILKING COMPETITION**, for quality, open to  
Classes 132 to 134.—PREMIUMS, £3, £2, and £1.

- 1st No. 1065 Leith, Mrs R. L., Breakachy, Laggan, Kingussie (British Saanen), "Cornish Rayon d'Or Q\*" (10,059).  
 2nd No. 1063 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista\*" (10,916).  
 3rd No. 1070 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British), "Dainty of Swanston Q\*" (10,944).

**CLASS 140. MILKING COMPETITION**, for quantity, open to  
Classes 132 to 134.—PREMIUMS, £3, £2, and £1.

- 1st No. 1070 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British), "Dainty of Swanston Q\*" (10,944).  
 2nd No. 1063 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista\*" (10,916).  
 3rd No. 1068 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British), "Cornish Sanssouci \*\*Q\*\*" (9940).

## PIGS

## LARGE WHITE.

*PRESIDENT'S CHAMPION MEDAL for best Large White Pig.*

No. 1091 Cowper, John E. B., Gogar Mains, Edinburgh, "Halbeath Jay 9th" (80,277) (Ear No. 275).

*Reserve*—No. 1130 Elder, A. J., City Mills, Dunfermline, "Touch Lady Topsy 12th" (Ear No. 787).

Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best Large White Pig. "Extra Stock" eligible to compete. This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 1091 Cowper, John E. B., Gogar Mains, Edinburgh, "Halbeath Jay 9th" (80,277) (Ear No. 275).

Gold Medal, value £5 (or cash), for best Large White Boar. "Extra Stock" eligible to compete. Given by the National Pig-Breeders' Association.

No. 1091 Cowper, John E. B., Gogar Mains, Edinburgh, "Halbeath Jay 9th" (80,277) (Ear No. 275).

Special Prizes for the best Group of Four Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete. Given by the National Pig-Breeders' Association.

1st Nos. 1096, 1114, 1130, 1159 Elder, A. J., City Mills, Dunfermline.

2nd Nos. 1116, 1131, 1160, 1177 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline.

Special Prize of £1, 1s. for best Large White Pig whose dam has qualified for, and is registered in, the National Pig-Breeders' Association's Advance Register of Fecundity. Given by the National Pig-Breeders' Association.

No. 1091 Cowper, John E. B., Gogar Mains, Edinburgh, "Halbeath Jay 9th" (80,277) (Ear No. 275).

**CLASS 141. BOAR, born before 1934.—PREMIUMS,**  
£8, £4, and £2.

1st No. 1085 Elder, A. J., City Mills, Dunfermline, "Aldenharn Bradbury 25th" (82,799) (Ear No. 5667).

2nd No. 1087 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh, "Barfield Boy 2nd" (87,385) (Ear No. 1252).

3rd No. 1086 North of Scotland College of Agriculture, Craibstone Farm, Bucksburn, Aberdeen, "Touch Hercules 18th" (85,763) (Ear No. 801).

V No. 1083 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Dick" (83,957) (Ear No. 3681).

H No. 1090 University of Edinburgh (Institute of Animal Genetics), Shothhead, Balerno, Midlothian, "Histon Royal Prince" (80,579) (Ear No. 872).

**EXTRA STOCK.**

The following was awarded a Premium of £3 :—

- No. 1091 Cowper, John E. B., Gogar Mains, Edinburgh, "Halbeath Jay 9th" (80,277) (Ear No. 275).

**CLASS 142. BOAR, born in 1934 before 1st July.—**  
**PREMIUMS, £8, £4, and £2.**

- 1st No. 1093 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Cults King David" (88,203) (Ear No. 860).  
 2nd No. 1098 Jones, Messrs, Dunmore Park, Dunmore, Stirlingshire, "Dunmore Banner 9th" (Ear No. 1018).  
 3rd No. 1096 Elder, A. J., City Mills, Dunfermline (Ear No. 893).  
 V No. 1100 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh, "Raith Rover 2nd" (90,299) (Ear No. 19).  
 H No. 1095 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Prince Charlie" (88,791) (Ear No. 4255).

**CLASS 143. BOAR, born in 1934 on or after 1st July.—**  
**PREMIUMS, £6, £4, and £2.**

- 1st No. 1111 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 615).  
 2nd No. 1110 Paton, John D., Grandholme, Aberdeen, "Adderley Majesty 7th" (Ear No. 806).  
 3rd No. 1108 Milne, John, Upper Affloch, Dun Echt, Aberdeenshire, "Affloch King David 31st" (Ear No. 148).  
 V No. 1109 Milne, John, Upper Affloch, Dun Echt, Aberdeenshire, "Affloch King David 32nd" (Ear No. 149).  
 H No. 1104 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Cults Prince George 2nd" (Ear No. 1047).

**CLASS 144. BOAR, born in 1935.—PREMIUMS,**  
**£6, £3, and £1.**

- 1st No. 1116 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline (Ear No. 756).  
 2nd No. 1125 Taylor, G. C., Moncur, Inchtute, Perthshire, "Moncur Jay 2nd" (Ear No. 264).  
 3rd No. 1115 Ferguson, W. & J., Bankhead, Raith, Kirkcaldy (Ear No. 59).  
 V No. 1114 Elder, A. J., City Mills, Dunfermline (Ear No. 1117).  
 H No. 1123 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 766).  
 C No. 1117 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline (Ear No. 762).  
 C No. 1120 North of Scotland College of Agriculture, Craibstone Farm, Bucksburn, Aberdeen (Ear No. 840).  
 C No. 1122 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 764).

Gold Medal, value £5 (or cash), for best Large White Sow. "Extra Stock" eligible to compete. Given by the National Pig-Breeders' Association.

- No. 1130 Elder, A. J., City Mills, Dunfermline, "Touch Lady Topsy 12th" (Ear No. 787).

**CLASS 145.** SOW, born before 1934.—PREMIUMS,  
£8, £4, and £2.

- 1st No. 1130 Elder, A. J., City Mills, Dunfermline, "Touch Lady Topsy 12th" (Ear No. 787).  
2nd No. 1138 University of Edinburgh (Institute of Animal Genetics), Shothhead, Balerno, Midlothian, "Shothhead Betty 2nd" (224,920) (Ear No. 196).  
3rd No. 1132 Jones, Messrs, Dunmore Park, Dunmore, Stirlingshire, "Dunmore Belle 6th" (212,778) (Ear No. 753).  
V No. 1131 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, "Halbeath Beauty 11th" (222,062) (Ear No. 337).  
H No. 1129 Elder, A. J., City Mills, Dunfermline, "Ballechin Betty" (219,408) (Ear No. 17).  
C No. 1134 North of Scotland College of Agriculture, Craibstone Farm, Bucksburn, Aberdeen, "Craibstone Poppy 12th" (Ear No. 566).

**CLASS 146.** SOW, born in 1934 before 1st July.—  
PREMIUMS, £8, £4, and £2.

- 1st No. 1140 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Blackberry 3rd" (233,028) (Ear No. 4259).  
2nd No. 1153 Taylor, G. C., Moncur, Inchture, Perthshire, "Tockwith Blackberry 74th" (Ear No. 4264).  
3rd No. 1146 Leitch, Messrs, Inchstelly, Alves, Forres, "Inchstelly Maggie 939th" (Ear No. 939).  
V No. 1142 Cox, J. Ernest, Methven Castle, Methven, "Methven Buttercup 4th" (Ear No. 403).  
H No. 1149 North of Scotland College of Agriculture, Craibstone Farm, Bucksburn, Aberdeen, "Craibstone Poppy 14th" (Ear No. 666).  
C No. 1150 North of Scotland College of Agriculture, Craibstone Farm, Bucksburn, Aberdeen, "Craibstone Poppy 15th" (Ear No. 667).

**CLASS 147.** SOW, born in 1934 on or after 1st July.—  
PREMIUMS, £6, £4, and £2.

- 1st No. 1161 Jones, Messrs, Dunmore Park, Dunmore, Stirlingshire, "Dunmore Marigold" (Ear No. 1046).  
2nd No. 1160 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, "Halbeath Beauty 26th" (Ear No. 666).  
3rd No. 1159 Elder, A. J., City Mills, Dunfermline (Ear No. 1027).  
V No. 1170 Whamond, J. A., & Sons, Ltd., Angus and Meikle Mills, Kirriemuir, "Tockwith Maid 2nd" (Ear No. 4444).  
H No. 1166 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 612).  
C No. 1164 Milne, John, Upper Affloch, Dunecht, Aberdeenshire, "Affloch Sunray 45th" (Ear No. 150).  
C No. 1167 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 638).

**CLASS 148.** SOW, born in 1935.—PREMIUMS, £6, £3, and £1.

- 1st No. 1187 Taylor, G. C., Moncur, Inchture, Perthshire, "Moncur Kate 10th" (Ear No. 268).  
 2nd No. 1180 Milne, John, Upper Affloch, Dunecht, Aberdeenshire, (Ear No. 179).  
 3rd No. 1171 Cochran, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife (Ear No. 1264).  
 V No. 1178 Leitch, Messrs, Inchstelly, Alves, Forres (Ear No. 1048).  
 H No. 1175 Elder, A. J., City Mills, Dunfermline (Ear No. 1149).  
 C No. 1185 Royal Edinburgh Hospital, West House, Morningside Place, Edinburgh (Ear No. 774).

**LARGE BLACK.***PRESIDENT'S CHAMPION MEDAL for best Large Black Pig.*

- No. 1205 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Model 1st" (H 1284).

- Reserve* No. 1203 Elder, J. S., East Bearford, Haddington, "Bearford Bounty" (L 62).

Silver Challenge Cup, value 12 Guineas, *for best Large Black Boar or Sow owned by an Exhibitor resident in Scotland.* Given by the Large Black Pig Society.

- No. 1203 Elder, J. S., East Bearford, Haddington, "Bearford Bounty" (L 62).

Silver Medal *for the best Large Black Boar.* Given by the Large Black Pig Society.

- No. 1193 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Bardolph Night Boy" (E 417).

**CLASS 149.** BOAR, born before 1935.—PREMIUMS, £8, £4, and £2.

- 1st No. 1193 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Bardolph Night Boy" (E 417).  
 2nd No. 1192 Elder, J. S., East Bearford, Haddington, "Bearford Beau 1st" (M 255).  
 3rd No. 1191 Elder, J. S., East Bearford, Haddington, "Bearford Lucky Man" (L 277).

**CLASS 150.** BOAR, born in 1935.—PREMIUMS, £6, £3, and £1.

- 1st No. 1194 Adam, James, Park, Nairn, "Park Leader" (N 71).  
 2nd No. 1195 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Sandy 1st" (N 37).  
 3rd No. 1198 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Patshull Leader 23rd" (N 45).  
 V No. 1197 McCaig & Goodchild, Foreside of Cairn, Forfar, "Yam Jubilee" (N 35).  
 H No. 1196 Elder, J. S., East Bearford, Haddington, "Bearford Beau 3rd" (N 29).

Silver Medal for the best Large Black Sow. Given by the Large Black Pig Society.

No. 1205 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Model 1st" (H 1284).

**CLASS 151. SOW, born before 1934.—PREMIUMS, £8, £4, and £2.**

- 1st No. 1205 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Model 1st" (H 1284).
- 2nd No. 1203 Elder, J. S., East Bearford, Haddington, "Bearford Bounty" (L 62).
- 3rd No. 1204 M'Caig & Goodchild, Foreside of Cairn, Forfar, "Yam Etta 1st" (H 56).
- V No. 1202 Elder, J. S., East Bearford, Haddington, "Bearford Jill 12th" (K 1284).
- H No. 1201 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Betty 2nd" (K 730).
- C No. 1199 Adam, James, Park, Nairn, "Pakenham Lady of Spain 2nd" (K 914).
- C No. 1200 Adam, James, Park, Nairn, "Pakenham Moonbeam 8th" (L 116).

**CLASS 152. SOW, born in 1934.—PREMIUMS, £8, £4, and £2.**

- 1st No. 1211 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Black Bess 5th" (M 54).
- 2nd No. 1207 Elder, J. S., East Bearford, Haddington, "Bearford Judy" (M 468).
- 3rd No. 1210 M'Caig & Goodchild, Foreside of Cairn, Forfar, "Yam Erica 18th" (M 802).
- V No. 1206 Elder, J. S., East Bearford, Haddington, "Bearford Moonray 5th" (M 466).
- H No. 1209 M'Caig & Goodchild, Foreside of Cairn, Forfar, "Yam Erica 27th" (M 800).
- C No. 1208 Elder, J. S., East Bearford, Haddington, "Bearford Beauty 2nd" (M 470).

**CLASS 153. SOW, born in 1935.—PREMIUMS, £6, £3, and £1.**

- 1st No. 1216 Elder, J. S., East Bearford, Haddington, "Bearford Bountiful 3rd" (N 44).
- 2nd No. 1219 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Molly 2nd" (N 78).
- 3rd No. 1218 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Patshull Bangle 44th" (N 76).
- V No. 1213 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Lily 1st" (N 60).
- H No. 1217 M'Caig & Goodchild, Foreside of Cairn, Forfar, "Yam Elizetta 11th" (N 52).
- C No. 1212 Adam, James, Park, Nairn, "Park Lady" (N 122).
- C No. 1214 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Lily 2nd" (N 62).



## SCOTTISH BACON PIG COMPETITION.

Silver Challenge Cup and Large Silver Medal for *Exhibit securing largest number of points in Stages I., II., and III.*

No. 78 Silcock, R., & Sons, Ltd., Thornton Hall Farm, Lancashire (Large White).

PREMIUMS, £10, £8, £5, £4, £2, £1, and £1.

- 1st No. 78 Silcock, R., & Sons, Ltd., Thornton Hall Farm, Lancashire (Large White).
- 2nd No. 55 Leitch, Messrs, Inchstelly, Alves, Forres (Large White).
- 3rd No. 24 Crichton Royal Institution, Dumfries (Large White).
- 4th No. 53 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline (Large White).
- 5th No. 43 Findlay, Robert, Easter Cadder, Kirkintilloch (Large White).
- 6th No. 49 Galbraith's Stores, Ltd., Hollows Farm, Paisley (Welsh Cross).
- 7th No. 41 Findlay, Robert, Easter Cadder, Kirkintilloch (Large White).
- V No. 39 Duthie Experimental Stock Farm, Bucksburn, Aberdeen (Large White).
- H No. 31 Davidson, H. R., Common Lane, Batford, Harpenden, Herts. (Large White).
- C No. 27 Dalziel, G. H., Grovita Tomato Farm, Forres, Moray (Large White).
- C No. 46 Findlay, Robert, Easter Cadder, Kirkintilloch (Tamworth/Large White).
- C No. 92 Whamond, J. A., & Sons, Ltd., Angus and Meigle Mills, Kirriemuir (Large White Cross).

## POULTRY

First Premium—Twenty Shillings. Second Premium—Ten Shillings. In each Class in which there are four or more entries a Third Prize of Five Shillings may be awarded, provided there is sufficient merit in the pens.

Champion Challenge Silver Salver, value £30, for the best Exhibit in the Poultry Classes. Given by the late Lord Dewar.

No. 7 Weir, James, Adisham Court, Canterbury, Kent (Leghorn, Hen, White).

Champion Silver Medals are offered as follows :—

### 1. *Best Cock, any variety.*

No. 243 Greenhow & Hartley, Galaberry Poultry Farm, Annan (Old English Game, Cock).

### 2. *Best Hen, any variety.*

No. 7 Weir, James, Adisham Court, Canterbury, Kent (Leghorn, Hen, White).

### 3. *Best Cockerel, any variety.*

No. 154 Reid, David, Firthview, Portgordon (Rhode Island Red, Cockerel).

### 4. *Best Pullet, any variety.*

No. 128 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Wyandotte, Pullet, White).

### 5. *Best Waterfowl.*

No. 459 Harrop, Captain N. M., Garthgynan, Ruthin, North Wales (Gander).

### 6. *Best Turkey.*

No. 460 Andrew, Mrs Jessie, South Tulloclord, Oldmeldrum (Cock).

### 7. *Best Utility Bird (Classes 88-102).*

No. 332 Binnie, W., & Sons, Garth House, Denny (Leghorn, Cock, White).

## CLASS 1. LEGHORN—White—Cock.

1st No. 1 Binnie, W., & Sons, Garth House, Denny.  
2nd No. 3 Graham, Mrs, Wallacetown Cottages, Gasstown, Dumfries.

## CLASS 2. LEGHORN—White—Hen.

1st No. 7 Weir, James, Adisham Court, Canterbury, Kent.  
2nd No. 4 Binnie, W., & Son, Garth House, Denny.  
3rd No. 6 Miller, John, 7 Park Street, Tillicoultry.

**CLASS 3. LEGHORN—White—Cockerel.**

- 1st No. 10 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.  
 2nd No. 8 Binnie, W., & Son, Garth House, Denny.

**CLASS 4. LEGHORN—White—Pullet.**

- 1st No. 11 Binnie, W., & Son, Garth House Denny.  
 2nd No. 13 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.

**CLASS 5. LEGHORN—Any other Colour—Cock.**

- 1st No. 16 M'Pherson, Robert, Drumboy, Darvel (Brown).  
 2nd No. 15 M'Pherson, Robert, Drumboy, Darvel (Brown).  
 3rd No. 14 Brown, Charles D., Ivybank, Kintore (Brown).

**CLASS 6. LEGHORN—Any other Colour—Hen.**

- 1st No. 18 Brown, Charles D., Ivybank, Kintore (Brown).  
 2nd No. 23 Rutherford, A., & Son, Parliament Square, Kinross (Black).  
 3rd No. 22 Ross, J. C., Stirling Road, Larbert (Black).  
 H No. 19 Clark, George, 43 Anderson Street, Wishaw (Black).

**CLASS 7. LEGHORN—Any other Colour—Cockerel.**

- 1st No. 26 Hearn, John, Linkinhorne, Callington, Cornwall (Brown).  
 2nd No. 27 M'Pherson, Robert, Drumboy, Darvel (Brown).  
 3rd No. 25 Glencross, James H., Artella Cottage, Glencraig, Fife (Brown).

**CLASS 8. LEGHORN—Any other Colour—Pullet.**

- 1st No. 29 M'Pherson, Robert, Drumboy, Darvel (Black).  
 2nd No. 28 Hearn, John, Linkinhorne, Callington, Cornwall (Brown).

**CLASS 9. MINORCA—Cock.**

- 1st No. 32 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 31 Arnott, David, Easter Frew, Kippen Station.  
 3rd No. 33 Binnie, W., & Son, Garth House, Denny.  
 H No. 30 Argo, Fred, Bructor Farm, Inverurie.

**CLASS 10. MINORCA—Hen.**

- 1st No. 36 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 35 Argo, Fred, Bructor Farm, Inverurie.  
 3rd No. 42 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 H No. 40 Graham, John, Kirkfield, Lanark.  
 C No. 37 Dalrymple, John, & Son, Meadowview, Leslie, Fife.

**CLASS 11. MINORCA—Cockerel.**

- 1st No. 43 Argo, Fred, Bructor Farm, Inverurie.  
 2nd No. 45 Binnie, W., & Son, Garth House, Denny.  
 3rd No. 47 Russell, John, Tinto View, Pettinain, Biggar.  
 H No. 46 Graham, John, Kirkfield, Lanark.  
 C No. 44 Arnott, David, Easter Frew, Kippen Station.

**CLASS 12. MINORCA—Pullet.**

- 1st No. 52 Graham, John, Kirkfield, Lanark.
- 2nd No. 48 Argo, Fred, Bructor Farm, Inverurie.
- 3rd No. 51 Binmie, W., & Son, Garth House, Denny.
- V No. 53 Russell, John, Tinto View, Pettinain, Biggar.
- H No. 49 Argo, Fred, Bructor Farm, Inverurie.

**CLASS 13. SCOTCH GREY—Cock.**

- 1st No. 55 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- 2nd No. 54 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- C No. 56 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3.

**CLASS 14. SCOTCH GREY—Hen.**

- 1st No. 58 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- 2nd No. 57 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- C No. 59 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3.

**CLASS 15. SCOTCH GREY—Cockerel.**

- 1st No. 61 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- 2nd No. 60 Hamilton, Thomas, Kirkton Kilns, Bathgate
- H No. 62 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3.

**CLASS 16. SCOTCH GREY—Pullet.**

- 1st No. 63 Ramsay, William, Busby Farm, Crosshouse, Kilmarnock.
- 2nd No. 64 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3.

**CLASS 17. PLYMOUTH ROCK—Barred—Cock.**

- 1st No. 67 Orr, James D., Gargunnoch, Stirling.
- 2nd No. 65 Argo, Fred, Bructor Farm, Inverurie.
- 3rd No. 68 Orr, James D., Gargunnoch, Stirling.

**CLASS 18. PLYMOUTH ROCK—Barred—Hen.**

- 1st No. 69 Brown, Charles D., Ivybank, Kintore.
- 2nd No. 71 Orr, James D., Gargunnoch, Stirling.
- 3rd No. 72 Orr, James D., Gargunnoch, Stirling.
- C No. 70 Forsyth, William W., Henfield Poultry Farm, North Berwick.

**CLASS 19. PLYMOUTH ROCK—Barred—Cockerel.**

- 1st No. 75 Brown, Charles D., Ivybank, Kintore.
- 2nd No. 74 Allenby, E. W., Three Oaks, Virginia Water, Surrey.
- 3rd No. 77 Orr, James D., Gargunnoch, Stirling.

**CLASS 20. PLYMOUTH ROCK—Barred—Pullet.**

- 1st No. 80 Brown, Charles D., Ivybank, Kintore.
- 2nd No. 78 Allenby, E. W., Three Oaks, Virginia Water, Surrey.
- 3rd No. 82 Orr, James D., Gargunnoch, Stirling.

**CLASS 21. PLYMOUTH ROCK**—Any other Colour—Cock or Cockerel.

- 1st No. 86 Orr, James D., Gargunnoch, Stirling (Cock, Buff).  
 2nd No. 85 Orr, James D., Gargunnoch, Stirling (Cock, Columbian).  
 3rd No. 83 Dickson, John H., Howlets Ha', Gordon, Berwickshire (Cockerel, Buff).

**CLASS 22. PLYMOUTH ROCK**—Any other Colour—Hen or Pullet.

- 1st No. 87 Allenby, E. W., Three Oaks, Virginia Water, Surrey (Hen, Black).  
 2nd No. 90 Orr, James D., Gargunnoch, Stirling (Hen, Columbian).  
 3rd No. 91 Orr, James D., Gargunnoch, Stirling (Hen, Buff).  
 H No. 88 Dickson, John H., Howlets Ha', Gordon, Berwickshire (Pullet, Buff).

**CLASS 23. ORPINGTON**—Black—Cock or Cockerel.

- 1st No. 92 Lambie, Gavin, 45 Temple Hill, Troon (Cock).  
 2nd No. 93 Lambie, Gavin, 45 Temple Hill, Troon (Cock).

**CLASS 24. ORPINGTON**—Black—Hen or Pullet.

- 1st No. 97 Patton & Son, 12 The Crescent, Luncarty, Perth (Hen).  
 2nd No. 95 Lambie, Gavin, 45 Temple Hill, Troon (Hen).  
 C No. 96 Lambie, Gavin, 45 Temple Hill, Troon (Hen).

**CLASS 25. ORPINGTON**—Any other Colour—Cock or Cockerel.

- 1st No. 99 Lambie, Gavin, 45 Temple Hill, Troon (Cock, Buff).  
 2nd No. 100 Orr, James D., Gargunnoch, Stirling (Cock, Blue).  
 V No. 98 Hamilton, Thomas, Kirkton Kilns, Bathgate (Cockerel, Buff).

**CLASS 26. ORPINGTON**—Any other Colour—Hen or Pullet.

- 1st No. 103 Lambie, Gavin, 45 Temple Hill, Troon (Hen, Buff).  
 2nd No. 105 Rodger, David, Bonnyton, Eaglesham (Hen, White).  
 3rd No. 104 Orr, James D., Gargunnoch, Stirling (Hen, Blue).  
 H No. 102 Lambie, Gavin, 45 Temple Hill, Troon (Hen, Buff).

**CLASS 27. WYANDOTTE**—Gold or Silver—Cock.

- 1st No. 107 Spensley, Herbert, Oaks Farm, Menston-in-Wharfedale, Leeds (Silver).  
 2nd No. 106 Morgan, William, Balcurvie, Windygates, Fife (Gold).

**CLASS 28. WYANDOTTE**—Gold or Silver—Hen.

- 1st No. 108 Spensley, Herbert, Oaks Farm, Menston-in-Wharfedale, Leeds (Silver).

**CLASS 29. WYANDOTTE**—Gold or Silver—Cockerel.

*(Not Forward.)*

**CLASS 30. WYANDOTTE**—Gold or Silver—Pullet.

- 1st No. 110 Morgan, William, Balcurvie, Windygates, Fife (Gold).

**CLASS 31. WYANDOTTE—White—Cock.**

- 1st No. 111 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 113 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.  
 3rd No. 114 Rodger, David, Bonnyton, Eaglesham.  
 V No. 112 Doig, William L., Joint Hospital, Invergordon.

**CLASS 32. WYANDOTTE—White—Hen.**

- 1st No. 117 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 118 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.  
 3rd No. 119 Rodger, David, Bonnyton, Eaglesham.  
 V No. 116 Begg, George, Dunvegan, Arbeadie, Banchory.  
 C No. 115 Begg, George, Dunvegan, Arbeadie, Banchory.

**CLASS 33. WYANDOTTE—White—Cockerel.**

- 1st No. 120 Argo, Fred, Bructor Farm, Inverurie.  
 2nd No. 122 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.  
 3rd No. 124 Rodger, David, Bonnyton, Eaglesham.  
 V No. 125 Shewan, Alexander, Longhillock, Alves, Forres.  
 C No. 121 Binnie, W., & Son, Garth House, Denny.  
 C No. 123 Reid, David, Firthview, Portgordon.

**CLASS 34. WYANDOTTE—White—Pullet.**

- 1st No. 128 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.  
 2nd No. 130 Rodger, David, Bonnyton, Eaglesham.  
 3rd No. 126 Argo, Fred, Bructor Farm, Inverurie.  
 V No. 127 Binnie, W., & Son, Garth House, Denny.  
 C No. 129 Reid, David, Firthview, Portgordon.

**CLASS 35. WYANDOTTE—Partridge—Cock or Cockerel.**

- 1st No. 131 Argo, Fred, Bructor Farm, Inverurie (Cock).  
 2nd No. 132 Brown, Charles D., Ivybank, Kintore (Cock).

**CLASS 36. WYANDOTTE—Partridge—Hen or Pullet.**

- 1st No. 135 Smales, L. H., Arundel Howe, Whitby (Hen).  
 2nd No. 133 Brown, Charles D., Ivybank, Kintore (Hen).  
 V No. 134 Forsyth, William W., Henfield Poultry Farm, North Berwick (Hen).

**CLASS 37. WYANDOTTE—Columbian—Cock or Cockerel.**

- 1st No. 136 Dickinson, J., & Son, Hedgeways, Kemsing, Sevenoaks, Kent (Cock).

**CLASS 38. WYANDOTTE—Columbian—Hen or Pullet.**

(No Entry.)

**CLASS 39. WYANDOTTE**—Any other Colour—Cock or Cockerel.

- 1st No. 137 Hargreave, Roger, Abbeydene Poultry Farm, Whalley, Lancashire (Cock, Black).  
 2nd No. 138 Scott, James, Jun., Sornhill, Galston, Ayrshire (Cock, Black).

**CLASS 40. WYANDOTTE**—Any other Colour—Hen or Pullet.

- 1st No. 139 Hargreave, Roger, Abbeydene Poultry Farm, Whalley, Lancashire (Hen, Black).

**CLASS 41. RHODE ISLAND RED**—Cock.

- 1st No. 144 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 145 Reid, David, Firthview, Portgordon.  
 3rd No. 146 Rodger, David, Bonnyton, Eaglesham.  
 V No. 140 Allan, William, Newcastle, Halbeath, Dunfermline.  
 C No. 141 Black, Alexander Allan, 27 Beaconsfield Terrace, Turriff.  
 C No. 143 Dickson, John H., Howlets Ha', Gordon, Berwickshire.

**CLASS 42. RHODE ISLAND RED**—Hen.

- 1st No. 150 Reid, David, Firthview, Portgordon.  
 2nd No. 151 Reid, David, Firthview, Portgordon.  
 3rd No. 148 Allan, William, Newcastle, Halbeath, Dunfermline.

**CLASS 43. RHODE ISLAND RED**—Cockerel.

- 1st No. 154 Reid, David, Firthview, Portgordon.  
 2nd No. 153 Dickson, John H., Howlets Ha', Gordon, Berwickshire.

**CLASS 44. RHODE ISLAND RED**—Pullet.

- 1st No. 159 Reid, David, Firthview, Portgordon.  
 2nd No. 156 Dickson, John H., Howlets Ha', Gordon, Berwickshire.  
 3rd No. 158 Reid, David, Firthview, Portgordon.

**CLASS 45. SUSSEX**—Light—Cock.

- 1st No. 164 Rodger, David, Bonnyton, Eaglesham.  
 2nd No. 163 Morgan, William, Balcurvie, Windygates, Fife.  
 3rd No. 160 Argo, Fred, Bructor Farm, Inverurie.  
 V No. 161 French & Meikle, Harrismith, Birchwood Road, Wilmington, Kent.

**CLASS 46. SUSSEX**—Light—Hen.

- 1st No. 169 Rodger, David, Bonnyton, Eaglesham.  
 2nd No. 168 Morgan, William, Balcurvie, Windygates, Fife.  
 3rd No. 167 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire.

**CLASS 47. SUSSEX**—Light—Cockerel.

- 1st No. 173 Shewan, Alexander, Longhillock, Alves, Forres.  
 2nd No. 172 Rodger, David, Bonnyton, Eaglesham.  
 3rd No. 170 Argo, Fred, Bructor Farm, Inverurie.  
 V No. 174 White, James, Carterhaugh Home Farm, Selkirk.  
 C No. 171 French & Meikle, Harrismith, Birchwood Road, Wilmington, Kent.

**CLASS 48. SUSSEX—Light—Pullet.**

- 1st No. 177 Rodger, David, Bonnyton, Eaglesham.  
 2nd No. 178 Shewan, Alexander, Longhillock, Alves, Forres.  
 3rd No. 175 French & Meikle, Harrismith, Birchwood Road, Wilmington, Kent.  
 V No. 179 White, James, Carterhaugh Home Farm, Selkirk.

**CLASS 49. SUSSEX—Any other Variety—Cock.**

- 1st No. 181 Morgan, William, Balcurvie, Windygates, Fife (White).  
 2nd No. 180 Cruickshank Brothers, West Leys, Lessendrum, Huntly (Speckled).

**CLASS 50. SUSSEX—Any other Variety—Hen.**

- 1st No. 182 Morgan, William, Balcurvie, Windygates, Fife (White).

**CLASS 51. SUSSEX—Any other Variety—Cockerel.**

- 1st No. 183 Argo, Fred, Bructor Farm, Inverurie (Speckled).

**CLASS 52. SUSSEX—Any other Variety—Pullet.**

- 1st No. 184 Argo, Fred, Bructor Farm, Inverurie (Speckled).

**CLASS 53. DORKING—Coloured—Cock.**

- 1st No. 185 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 186 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 54. DORKING—Coloured—Hen.**

- 1st No. 188 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 187 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 55. DORKING—Coloured—Cockerel.**

- 1st No. 189 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 190 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 56. DORKING—Coloured—Pullet.**

- 1st No. 191 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 192 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 57. DORKING—Silver Grey—Cock.**

- 1st No. 197 Mechie, John, Upper Greens, Auchtermuchty.  
 2nd No. 194 Cruickshank Brothers, West Leys, Lessendrum, Huntly.  
 3rd No. 196 Major, A. J., Ditton, Langley, Buckinghamshire.  
 H No. 193 Bryce, William, Snaigow, Murthly.  
 C No. 195 Macintyre, John, Broombank, Blane field.

**CLASS 58. DORKING—Silver Grey—Hen.**

- 1st No. 200 Mechie, John, Upper Greens, Auchtermuchty.  
 2nd No. 203 Walker, John, Skinners Steps, Cupar, Fife.  
 3rd No. 198 Bryce, William, Snaigow, Murthly.  
 V No. 199 Major, A. J., Ditton, Langley, Buckinghamshire.  
 H No. 201 Rogers, James, Forneth, Blairgowrie.  
 C No. 202 Rogers, James, Forneth, Blairgowrie.



**CLASS 59. DORKING—Silver Grey—Cockerel.**

- 1st No. 206 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 207 Major, A. J., Ditton, Langley, Buckinghamshire.  
 3rd No. 204 Bryce, William, Snaigow, Murthly.  
 V No. 208 Mechie, John, Upper Greens, Auchtermuchty.

**CLASS 60. DORKING—Silver Grey—Pullet.**

- 1st No. 210 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 212 Mechie, John, Upper Greens, Auchtermuchty.  
 3rd No. 211 Major, A. J., Ditton, Langley, Buckinghamshire.  
 V No. 209 Bryce, William, Snaigow, Murthly.

**CLASS 61. SCOTS DUMPY—Cock.**

- 1st No. 215 Kerr, J. E., of Harviestoun, Dollar.  
 2nd No. 214 Kerr, J. E., of Harviestoun, Dollar.  
 3rd No. 216 Major, A. J., Ditton, Langley, Buckinghamshire.  
 V No. 213 Kerr, J. E., of Harviestoun, Dollar.

**CLASS 62. SCOTS DUMPY—Hen.**

- 1st No. 217 Kerr, J. E., of Harviestoun, Dollar.  
 2nd No. 218 Kerr, J. E., of Harviestoun, Dollar.  
 3rd No. 220 Major, A. J., Ditton, Langley, Buckinghamshire.  
 V No. 219 Kerr, J. E., of Harviestoun, Dollar.

**CLASS 63. SCOTS DUMPY—Cockerel or Pullet.**

- 1st No. 221 Kerr, J. E., of Harviestoun, Dollar.  
 2nd No. 222 Kerr, J. E., of Harviestoun, Dollar.

**CLASS 64. BARNEVELDER—Cock.**

- 1st No. 224 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 226 Ferguson, G., & Son, 44 High Street, Clackmannan.  
 3rd No. 225 Ferguson, G., & Son, 44 High Street, Clackmannan.  
 V No. 227 Morgan, William, Balcurvie, Windygates, Fife.

**CLASS 65. BARNEVELDER—Hen.**

- 1st No. 228 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 229 Hargreave, Roger, Abbeydene Poultry Farm, Whalley, Lancashire.  
 V No. 230 Morgan, William, Balcurvie, Windygates, Fife.

**CLASS 66. BARNEVELDER—Cockerel.**

- 1st No. 231 Binnie, W., & Son, Garth House, Denny.

**CLASS 67. BARNEVELDER—Pullet.**

- 1st No. 232 Binnie, W., & Son, Garth House, Denny.

**CLASS 68. INDIAN GAME—Cock.**

- 1st No. 234 Lambie, Gavin, 45 Temple Hill, Troon.  
 2nd No. 233 Black, William A. P., Croftfoot, Old Polmont.  
 V No. 235 Weir, James, Adisham Court, Canterbury, Kent.

**CLASS 69. INDIAN GAME—Hen.**

- 1st No. 238 Brent, Cecil, Clampit, Callington, Cornwall.  
 2nd No. 237 Black, William A. P., Croftfoot, Old Polmont.  
 V No. 236 Black, William A. P., Croftfoot, Old Polmont.

**CLASS 70. INDIAN GAME—Cockerel.**

- 1st No. 239 Black, William A. P., Croftfoot, Old Polmont.

**CLASS 71. INDIAN GAME—Pullet.**

- 1st No. 240 Black, William A. P., Croftfoot, Old Polmont.  
 2nd No. 241 Brent, Cecil, Clampit, Callington, Cornwall.

**CLASS 72. OLD ENGLISH GAME—Cock.**

- 1st No. 243 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 2nd No. 250 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3.  
 3rd No. 247 Slater, A., The Old Vicarage, Lythe, Whitby.  
 V No. 244 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 H No. 242 Crichton, David, Jun., 7 Well Street, Cupar, Fife.  
 C No. 246 Slater, A., The Old Vicarage, Lythe, Whitby.

**CLASS 73. OLD ENGLISH GAME—Hen.**

- 1st No. 252 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 2nd No. 253 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 3rd No. 256 Stewart, Duncan M., Millhills, Crieff.  
 V No. 251 Crichton, David, Jun., 7 Well Street, Cupar, Fife.  
 H No. 254 Slater, A., The Old Vicarage, Lythe, Whitby.  
 C No. 257 Stewart, Duncan M., Millhills, Crieff.

**CLASS 74. OLD ENGLISH GAME—Cockerel.**

- 1st No. 258 Greenhow & Hartley, Galaberry Poultry Farm, Annan.

**CLASS 75. OLD ENGLISH GAME—Pullet.**

- 1st No. 259 Greenhow & Hartley, Galaberry Poultry Farm, Annan.

**CLASS 76. BANTAM GAME—Old English—Cock.**

- 1st No. 266 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire.  
 2nd No. 263 Lumsden & Son, 46 Crossgate, Cupar, Fife.  
 3rd No. 265 Morgan, William, Balcurvie, Windygates, Fife.  
 V No. 261 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 H No. 267 Paisley, Miss Molly, Parkhurst, Park Road, Harrogate.  
 C No. 268 Stuart, A. D., The Brighthouse, Westfield, Bathgate.

**CLASS 77. BANTAM GAME—Old English—Hen.**

- 1st No. 271 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 269 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 3rd No. 272 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire.  
 V No. 270 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 H No. 274 Stuart, A. D., The Brighthouse, Westfield, Bathgate.

**CLASS 78. BANTAM GAME—Modern—Cock.**

- 1st No. 279 White, Peter A., 19 Well Street, Cupar, Fife.  
 2nd No. 275 Delaney, James, & Son, Gateside, Fife.  
 3rd No. 276 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire.  
 V No. 278 Watson & Yule, 36 Summerfield Terrace, Aberdeen.  
 C No. 277 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire.

**CLASS 79. BANTAM GAME—Modern—Hen.**

- 1st No. 281 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 2nd No. 280 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 V No. 282 Watson & Yule, 36 Summerfield Terrace, Aberdeen.

**CLASS 80. BANTAM—Other than Game—Cock.**

- 1st No. 289 Scott, James, Jun., Sornhill, Galston, Ayrshire (Wyandotte, White).  
 2nd No. 283 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 3rd No. 286 Hough-Watson, H., Beckermest, Cumberland (Japanese).  
 V No. 292 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3 (Scotch Grey).  
 C No. 285 Hearnshaw, R. Fletcher, Burton Joyce, Nottingham (Barbu d'Anvers).  
 C No. 287 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire (Wyandotte, White).  
 C No. 291 Stuart, A. D., The Brighthouse, Westfield, Bathgate (Partridge).

**CLASS 81. BANTAM—Other than Game—Hen.**

- 1st No. 298 Hough-Watson, H., Beckermest, Cumberland (Pekin).  
 2nd No. 301 Scott, James, Jun., Sornhill, Galston, Ayrshire (Wyandotte, White).  
 3rd No. 304 Young, Dr Stephen, 6 Woodside Place, Glasgow, C. 3 (Scotch Grey).  
 V No. 293 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 C No. 294 Connolly, John, Buchanan Street, Balfron, Stirlingshire (Sebright, Silver).  
 C No. 295 Connolly, John, Buchanan Street, Balfron, Stirlingshire (Sebright, Gold).  
 C No. 300 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire (Rosecomb, Black).

**CLASS 82. BANTAM—Any Variety—Cockerel.**

- 1st No. 306 Delaney, James, & Son, Gateside, Fife (Modern Game).  
 2nd No. 307 Greenhow & Hartley, Galaberry Poultry Farm, Annan (Old English Game).  
 3rd No. 305 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 V No. 308 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire (Old English Game).

**CLASS 83. BANTAM—Any Variety—Pullet.**

- 1st No. 312 Delaney, James, & Son, Gateside, Fife (Modern Game).  
 2nd No. 313 Delaney, James, & Son, Gateside, Fife (Modern Game).  
 3rd No. 311 Boardley, J. A., Slyne Road, Lancaster (Wyandotte, Partridge).  
 V No. 317 Watson & Yule, 36 Summerfield Terrace, Aberdeen (Modern Game).  
 C No. 310 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).

**CLASS 84. ANY OTHER RECOGNISED BREED OF POULTRY —Cock.**

- 1st No. 320 Hough-Watson, H., Beckermct, Cumberland (Polish, Buff).  
 2nd No. 321 M'Pherson, Robert, Drumboy, Darvel (Hamburgh, Silver).  
 3rd No. 318 Firth, George, Read, Burnley (Modern Game).  
 V No. 324 Martin, Mrs David, 14 Castlefield, Cupar, Fife (Light Brahma).  
 C No. 322 M'Vicar, Daniel, Burnside Cottage, Lennoxtown, Stirlingshire (Gold Poland).

**CLASS 85. ANY OTHER RECOGNISED BREED OF POULTRY —Hen.**

- 1st No. 325 Firth, George, Read, Burnley (Modern Game).  
 2nd No. 327 Hough-Watson, H., Beckermct, Cumberland (Cochin, Buff).  
 3rd No. 326 Forsyth, William W., Henfield Poultry Farm, North Berwick (Polish, Black).  
 V No. 328 Martin, Mrs David, 14 Castlefield, Cupar, Fife (Hamburgh, Black).

**CLASS 86. ANY OTHER RECOGNISED BREED OF POULTRY —Cockerel.**

- 1st No. 330 Hough-Watson, H., Beckermct, Cumberland (Langshan, Black).  
 2nd No. 329 Glencross, James H., Artella Cottage, Glencairg, Fife (Australorp, Black).

**CLASS 87. ANY OTHER RECOGNISED BREED OF POULTRY —Pullet.**

- 1st No. 331 Hough-Watson, H., Beckermct, Cumberland (Polish, Silver).

**UTILITY POULTRY.**

**CLASS 88. LEGHORN—Any Variety—Cock or Cockerel.**

- 1st No. 332 Binnie, W., & Son, Garth House, Denny (Cock, White).  
 2nd No. 333 Glencross, James H., Artella Cottage, Glencairg, Fife (Cock, Exchequer).  
 V No. 334 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Cock, White).

**CLASS 89. ANY OTHER VARIETY—Light Breed—  
Cock or Cockerel.**

- 1st No. 335 Arnott, David, Easter Frew, Kippen Station (Minorca, Cockerel).  
 2nd No. 336 Binnie, W., & Son, Garth House, Denny (Minorca, Cock).  
 V No. 337 Glencross, James H., Artella Cottage, Glencraig, Fife (Minorca, Cock).

**CLASS 90. WYANDOTTE—Any Colour—Cock or Cockerel.**

- 1st No. 342 Binnie, W., & Son, Garth House, Denny (Cock, White).  
 2nd No. 339 Argo, Fred, Bructor Farm, Inverurie (Cock, White).  
 3rd No. 350 Rodger, David, Bonnyton, Eaglesham (Cock, White).  
 V No. 348 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Cock, White).  
 C No. 338 Argo, Fred, Bructor Farm, Inverurie (Cock, White).  
 C No. 346 Guthrie, Mungo F., Commonhead, Kilmarnock (Cock, White).  
 C No. 351 Weir, James, Adisham Court, Canterbury, Kent (Cock, White).

**CLASS 91. WELSUMMER—Cock or Cockerel.**

- 1st No. 353 Hargreave, Roger, Abbeydene Poultry Farm, Whalley, Lancashire (Cock).  
 2nd No. 355 Orr, James D., Gargunnoch, Stirling (Cockerel).  
 V No. 354 Orr, James D., Gargunnoch, Stirling (Cock).

**CLASS 92. ANY OTHER VARIETY—Heavy Breed—  
Cock or Cockerel.**

- 1st No. 359 Reid, David, Firthview, Portgordon (Rhode Island Red, Cock).  
 2nd No. 356 Black, Alexander Allan, 27 Beaconsfield Terrace, Turriff (Rhode Island Red, Cock).  
 V No. 357 Morgan, William, Balcurvie, Windygates, Fife (Rhode Island Red, Cock).  
 C No. 358 Orr, James D., Gargunnoch, Stirling (Plymouth Rock, Cock, Buff).

**CLASS 93. LEGHORN—White—Hen or Pullet.**

- 1st No. 360 Binnie, W., & Son, Garth House, Denny (Hen).  
 2nd No. 362 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream (Hen).  
 3rd No. 365 Reid, David, Firthview, Portgordon (Hen).  
 V No. 361 Guthrie, Mungo F., Commonhead, Kilmarnock (Hen).  
 C No. 364 Orr, James D., Gargunnoch, Stirling (Hen).

**CLASS 94. LEGHORN—Any other Colour—Hen or Pullet.**

- 1st No. 367 Guthrie, Mungo F., Commonhead, Kilmarnock (Hen, Black).  
 2nd No. 366 Clark, George, 43 Anderson Street, Wishaw (Hen, Black).

**CLASS 95. WYANDOTTE—Any Colour—Hen or Pullet.**

- 1st No. 375 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Hen, White).  
 2nd No. 379 Rodger, David, Bonnyton, Eaglesham (Hen, White).  
 3rd No. 370 Binnie, W., & Son, Garth House, Denny (Hen, White).  
 V No. 377 Reid, David, Firthview, Portgordon (Hen, White).  
 C No. 373 Grant-Peterkin, Lieut.-Colonel M. J., Grange Hall, Forres (Hen, White).  
 C No. 376 Reid, David, Firthview, Portgordon (Hen, White).

**CLASS 96. RHODE ISLAND RED—Hen or Pullet.**

- 1st No. 386 Dickson, John H., Howlets Ha', Gordon, Berwickshire (Pullet).  
 2nd No. 389 Reid, David, Firthview, Portgordon (Hen).  
 3rd No. 391 Rodger, David, Bonnyton, Eaglesham (Hen).  
 V No. 380 Allan, William, Newcastle, Halbeath, Dunfermline (Hen).  
 C No. 385 Dickinson, J., & Son, Hedgeways, Kemsing, Sevenoaks, Kent (Hen).  
 C No. 388 Morgan, William, Balcurvie, Windygates, Fife (Hen).  
 C No. 390 Reid, David, Firthview, Portgordon (Hen).

**CLASS 97. BARNEVELDER—Hen or Pullet.**

- 1st No. 393 Binnie, W., & Son, Garth House, Denny (Hen).  
 2nd No. 392 Arnott, David, Easter Frew, Kippen Station (Hen).  
 3rd No. 394 Morgan, William, Balcurvie, Windygates, Fife (Hen).  
 V No. 395 Orr, James D., Gargunnoch, Stirling (Hen).

**CLASS 98. ROCK—Any Colour—Hen or Pullet.**

- 1st No. 398 Morgan, William, Balcurvie, Windygates, Fife (Hen, Barred).  
 2nd No. 401 Orr, James D., Gargunnoch, Stirling (Hen, Barred).  
 3rd No. 400 Orr, James D., Gargunnoch, Stirling (Hen, Buff).  
 V No. 396 Dickson, John H., Howlets Ha', Gordon, Berwickshire (Pullet, Buff).  
 C No. 399 Orr, James D., Gargunnoch, Stirling (Hen, Buff).

**CLASS 99. WELSUMMER—Hen or Pullet.**

- 1st No. 404 Hargreave, Roger, Abbeydene Poultry Farm, Whalley, Lancashire (Hen).  
 2nd No. 405 Orr, James D., Gargunnoch, Stirling (Hen).  
 3rd No. 406 Orr, James D., Gargunnoch, Stirling (Hen).  
 V No. 403 Brown, Eric James, Hattonburn, Banchory, Kincardineshire (Hen).

**CLASS 100. ANY OTHER VARIETY—Hen or Pullet.**

- 1st No. 408 Binnie, W., & Son, Garth House, Denny (Minorca, Hen).  
 2nd No. 411 M'Gregor, Peter, Mill of Birkenbowcr, Lumsden, Aberdeenshire (Light Sussex, Hen).  
 3rd No. 412 Mechie, John, Upper Greens, Auchtermuchty (Dorking, Hen).  
 V No. 413 Morgan, William, Balcurvie, Windygates, Fife (Light Sussex, Hen).  
 C No. 407 Argo, Fred, Bructor Farm, Inverurie (Minorca, Hen).  
 C No. 410 Glencross, James H., Artella Cottage, Glencraig, Fife (Minorca, Hen).  
 C No. 414 Shewan, Alexander, Longhillock, Alves, Forres (Buff Orpington, Hen).

**CLASS 101. ANY CROSS FOR LAYING PURPOSES—Hen.**

- 1st No. 419 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 421 Sandison, Alfred L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 3rd No. 415 Dickson, John H., Howlets Ha', Gordon, Berwickshire.  
 V No. 422 Shewan, Alexander, Longhillock, Alves, Forres.  
 C No. 417 Guthrie, Mungo F., Commonhead, Kilmarnock.

**CLASS 102. ANY CROSS FOR LAYING PURPOSES—Pullet.**

- 1st No. 426 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 425 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 3rd No. 427 Shewan, Alexander, Longhillock, Alves, Forres.  
 V No. 424 Dickson, John H., Howlets Ha', Gordon, Berwickshire.

**CLASS 103. DUCKS—Aylesbury—Drake.**

- 1st No. 428 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 429 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 104. DUCKS—Aylesbury—Duck.**

- 1st No. 431 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 432 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 430 Argo, Fred, Bructor Farm, Inverurie.

**CLASS 105. DUCKS—Aylesbury—Drake (Young).**

- 1st No. 433 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 434 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 106. DUCKS—Aylesbury—Duck (Young).**

- 1st No. 436 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 435 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 107. DUCKS—Orpington—Drake.**

- 1st No. 438 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 437 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 108. DUCKS—Orpington—Duck.**

- 1st No. 439 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 440 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 109. DUCKS—Orpington—Drake (Young).**

- 1st No. 442 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 441 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 110. DUCKS—Orpington—Duck (Young).**

- 1st No. 443 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 444 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 111. DUCKS—Indian Runner—Drake.**

- 1st No. 447 Hough-Watson, H., Beckermest, Cumberland.  
 2nd No. 448 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeen-shire.  
 3rd No. 446 Hewetson, Rev. J., Burbage Vicarage, Buxton, Derbyshire.  
 V No. 450 Shewan, Alexander, Longhillock, Alves, Forres.  
 H No. 445 Argo, Fred, Bructor Farm, Inverurie.  
 C No. 449 M'Pherson, Robert, Drumboy, Darvel.

**CLASS 112. DUCKS—Indian Runner—Duck.**

- 1st No. 453 Hough-Watson, H., Beckermest, Cumberland.  
 2nd No. 454 M'Pherson, Robert, Drumboy, Darvel.  
 3rd No. 452 Hewetson, Rev. J., Burbage Vicarage, Buxton, Derbyshire.  
 V No. 455 Shewan, Alexander, Longhillock, Alves, Forres.  
 H No. 451 Argo, Fred, Bructor Farm, Inverurie.

**CLASS 113. DUCKS—Any other Variety—Drake.**

- 1st No. 456 M'Pherson, Robert, Drumboy, Darvel (Rouen).

**CLASS 114. DUCKS—Any other Variety—Duck.**

- 1st No. 458 M'Pherson, Robert, Drumboy, Darvel (Rouen).  
 2nd No. 457 Argo, Fred, Bructor Farm, Inverurie (Pekin).

**CLASS 115. GEESE—Gander.**

- 1st No. 459 Harrop, Captain N. M., Garthgynan, Ruthin, North Wales.  
 2nd No. 461 Shewan, Alexander, Longhillock, Alves, Forres.  
 V No. 460 Rottenburg, F. A., of Lochlane, Crieff.

**CLASS 116. GEESE—Goose.**

- 1st No. 464 Shewan, Alexander, Longhillock, Alves, Forres.  
 2nd No. 462 Harrop, Captain N. M., Garthgynan, Ruthin, North Wales.  
 3rd No. 465 Shewan, Alexander, Longhillock, Alves, Forres.  
 V No. 463 Rottenburg, F. A., of Lochlane, Crieff.

**CLASS 117. TURKEYS—Cock.**

- 1st No. 466 Andrew, Mrs Jessie, South Tulloford, Oldmeldrum.  
 2nd No. 472 Rottenburg, F. A., of Lochlane, Crieff.  
 3rd No. 470 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 469 Garioch, Miss Martha S., Newton, Logie-Coldstone, Dinnet.  
 H No. 471 Robb, Alexander, Jun., Blackhills, Dyke, Forres.  
 C No. 468 Craig, Miss Helen, Beebykes, Falkland, Fife.

**CLASS 118. TURKEYS—Hen.**

- 1st No. 477 Robb, Alexander, Jun., Blackhills, Dyke, Forres.  
 2nd No. 479 Shewan, Alexander, Longhillock, Alves, Forres.  
 3rd No. 476 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 474 Andrew, Mrs Jessie, South Tulloford, Oldmeldrum.  
 H No. 475 Andrew, Mrs Jessie, South Tulloford, Oldmeldrum.  
 C No. 478 Rottenburg, F. A., of Lochlane, Crieff.

**TABLE POULTRY.**

**CLASS 119. ANY PURE BREED—Cock.**

- 1st No. 484 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Wyandotte, White).  
 2nd No. 480 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 3rd No. 485 Mechie, John, Upper Greens, Auchtermuchty (Dorking, Silver Grey).  
 V No. 483 Gilmour, Allan, Grandtully Poultry Farm, Grandtully, Strathtay (Sussex, White).  
 H No. 482 Catto, Adam, Poultry Yards, Newmachar (Indian Game).  
 C No. 481 Black, William A. P., Croftfoot, Old Polmont (Indian Game).



**CLASS 120. ANY PURE BREED—Cockerel.**

- 1st No. 486 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
2nd No. 488 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Wyandotte, White).  
3rd No. 489 Morgan, William, Balcurvie, Windygates Fife (Light Sussex).

**CLASS 121. ANY CROSS—Cock.**

- 1st No. 491 Black, William A. P., Croftfoot, Old Polmont (Indian Game—Wyandotte).  
2nd No. 490 Black, William A. P., Croftfoot, Old Polmont (Indian Game—Sussex).  
3rd No. 492 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream (Game—Orpington).  
V No. 493 Shewan, Alexander, Longhillock, Alves, Forres (Wyandotte—Rock).

**CLASS 122. ANY CROSS—Cockerel.**

- 1st No. 494 Black, William A. P., Croftfoot, Old Polmont (Indian Game—Sussex).  
2nd No. 495 Shewan, Alexander, Longhillock, Alves, Forres (Wyandotte—Rock).

**CLASS 123. ANY PURE BREED OR CROSS—Pair of Pullets.**

- 1st No. 496 Black, William A. P., Croftfoot, Old Polmont (Indian Game Cross).  
2nd No. 500 Shewan, Alexander, Longhillock, Alves, Forres (Light Sussex).  
3rd No. 498 M'Gregor, Peter, Mill of Birkenbower, Lumsden, Aberdeenshire (Wyandotte, White).  
V No. 499 Morgan, William, Balcurvie, Windygates, Fife (Light Sussex).

## DAIRY PRODUCE

### CLASS 1. POWDERED BUTTER, not less than 3 lb.— PREMIUMS, £4, £3, £2, and £1.

- 1st No. 1 Fleming, Andrew, Threepland, Eaglesham.
- 2nd No. 9 Shanks, Miss, Broomhill, Denny.
- 3rd No. 5 Monteith, Mrs H., The Island, Bothkennar, Falkirk.
- 4th No. 2 Gilmour, John, Stonebyres, Eaglesham.

### CLASS 2. FRESH BUTTER, three 1-lb lots, to be made up in form of bricks.—PREMIUMS, £4, £3, £2, and £1.

- 1st No. 17 Mogford, Mrs J., Overcott, Rose Ash, South Molton, North Devon.
- 2nd No. 14 Kirk, Mrs, Burnhead, Auchterhouse, Angus.
- 3rd No. 18 Monteith, Mrs H., The Island, Bothkennar, Falkirk.
- 4th No. 10 Beer, Mrs E. B., Puddaven, Totnes, South Devon.

### CLASS 3. CHEDDAR CHEESE, 56 lb. and upwards.— PREMIUMS, £9, £5, £3, £2, and £1.

- 1st No. 24 M'Dowall, George, South Boreland, Dunragit.
- 2nd No. 23 Hyslop, Samuel, Cairnichill, Borgue, Kirkcudbright.
- 3rd No. 26 Paterson, Joseph, Dromore Dairy, Kirkcudbright.
- 4th No. 27 Simpson, William, Machermore Mains Dairy, Newton Stewart.
- 5th No. 25 M'Minn, Samuel, Torrs Dairy, Kirkcudbright.

### CLASS 4. CHEESE, 14 lb. and under.—PREMIUMS, £5, £3, £2, and £1.

- 1st No. 29 M'Dowall, George, South Boreland, Dunragit.
- 2nd No. 28 Hyslop, Samuel, Cairniehill, Borgue, Kirkcudbright.
- 3rd No. 33 Simpson, William, Machermore Mains Dairy, Newton Stewart.
- 4th No. 30 M'Minn, Samuel, Torrs Dairy, Kirkcudbright.
- V No. 31 Paterson, Joseph, Dromore Dairy, Kirkcudbright.

## EGGS

**CLASS 1.** One dozen HEN EGGS, white.—PREMIUMS,  
£1, 15s., and 10s.

- 1st No. 2 Black, Miss I., Croftfoot, Old Polmont, Falkirk.  
 2nd No. 12 Monteith, Mrs H., The Island, Bothkennar, Falkirk.  
 3rd No. 1 Binnie, Miss J., Garth House, Denny.  
 V No. 16 Rough, Miss J. F., Longbank, Kirriemuir.  
 H No. 13 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.  
 C No. 14 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.

**CLASS 2.** One dozen HEN EGGS, brown.—  
PREMIUMS, £1, 15s., and 10s.

- 1st No. 22 Brown, E. J., Hattonburn, Banchory.  
 2nd No. 27 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.  
 3rd No. 33 Struthers, Andrew, East Yardhouses, Carnwath.  
 V No. 34 Struthers, Andrew, East Yardhouses, Carnwath.  
 H No. 20 Anderson, William, Parkhill, Arbroath.  
 C No. 23 Dalgarno, Mrs J., Broombank, Peterculter.

**CLASS 3.** One dozen HEN EGGS, tinted.—  
PREMIUMS, £1, 15s., and 10s.

- 1st No. 40 Monteith, Mrs H., The Island, Bothkennar, Falkirk.  
 2nd No. 47 Smollett, Mrs, Lediken, Inch, Aberdeenshire.  
 3rd No. 48 Struthers, Andrew, East Yardhouses, Carnwath.  
 V No. 41 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.  
 H No. 35 Binnie, Miss J., Garth House, Denny.  
 C No. 42 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.

**CLASS 4.** One Dozen DUCK EGGS.—PREMIUMS,  
£1, 15s., and 10s.

- 1st No. 58 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.  
 2nd No. 60 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.  
 3rd No. 55 M'Gregor, Mrs P., Mill of Birkenbower, Lumsden, Aberdeenshire.  
 V No. 54 M'Gregor, Mrs P., Mill of Birkenbower, Lumsden, Aberdeenshire.  
 H No. 53 Lunan, Mrs H., Bogside, Forfar.  
 C No. 57 Monteith, Mrs H., The Island, Bothkennar, Falkirk.

**CLASS 5.** One Dozen TURKEY EGGS.—PREMIUMS,  
£1, 15s., and 10s.

- 1st No. 66 Duncan, Miss A., The Poultry Farm, Spey Bay.  
 2nd No. 67 Ross, Mrs, Westerton, Auchleuchries, Ellon.  
 3rd No. 64 Andrew, Mrs J., South Tulloford, Oldmeldrum.  
 V No. 68 Smollett, Mrs, Lediken, Inch, Aberdeenshire.  
 H No. 65 Andrew, Mrs J., South Tulloford, Oldmeldrum.

# HONEY, &c.

## OPEN CLASSES.

Silver Cup or Tazza. Presented by the late Mr R. Y. Howie, Rutherglen. *Awarded to the competitor gaining most points in the Classes for Honey and Wax only, calculated on the following basis: 1st Prize, 3 points; 2nd Prize, 2 points; 3rd Prize, 1 point. In the event of a tie, the competitor having most First Prizes to be adjudged the winner.*

Allan, George C., 7 Springvale Road, Ayr (27 points).

Silver and Bronze Medals awarded by the Scottish Bee-Keepers' Association *to the First and Second Winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st Prize, 3 points; 2nd Prize, 2 points; 3rd Prize, 1 point.*

Silver Medal—Allan, George C., 7 Springvale Road, Ayr (27 points).

Bronze Medal—Duguid, Robert, Victoria Apiary, Cornhill, Banffshire (20 points).

**CLASS 1.** Collection of APPLIANCES suitable for a beginner's outfit for Bee-keeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 2 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.
- 2nd No. 1 Duthie, Adam, & Co., Ltd., 14 Hadden Street, Aberdeen.
- 3rd No. 3 Young, R. & J., Wellington Place, Dunoon, Argyll.

**CLASS 2.** Best and most complete FRAME HIVE for general use, with any improvements. Unpainted.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 8 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.
- 2nd No. 6 Ogilvie, J. & A., 369 Union Street, Aberdeen.
- 3rd No. 5 Moffat, David, 65 Manse Road, Wishaw.
- V No. 4 Kilgour, J. D., 88 St Leonard's Street, Dunfermline.
- H No. 9 Young, R. & J., Wellington Place, Dunoon, Argyll.

**CLASS 3.** Best and most complete HIVE. Unpainted. Price not to exceed 35s.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 12 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.
- 2nd No. 10 Duthie, Adam, & Co., Ltd., 14 Hadden Street, Aberdeen.
- 3rd No. 13 Young, R. & J., Wellington Place, Dunoon, Argyll.
- V No. 11 Howatson, P. G., Camp Cottage, Motherwell.

**CLASS 4.** Six Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 14 Allan, George C., 7 Springvale Road, Ayr.
- 2nd No. 19 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.
- 3rd No. 16 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.
- V No. 15 Anderson, Gordon, Home Farm, Mayne, Elgin.
- H No. 17 Macdonald, D. G., Kinloch Gardens, Colleslie, Fife.
- C No. 18 Park, David C., Setonhill, Longniddry, East Lothian.

**CLASS 5.** Six Sections of HEATHER HONEY.—  
PREMIUMS, 20s., 15s., and 10s.

- 1st No. 21 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
2nd No. 24 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.  
3rd No. 20 Allan, George C., 7 Springvale Road, Ayr.  
V No. 23 Pate, Thomas, Hopefield, Milnathort, Kinross-shire.  
H No. 22 Hall, John, The Corner, Banchory.

**CLASS 6.** Six Jars of RUN or EXTRACTED LIGHT-COLOURED HONEY, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 25 Allan, George C., 7 Springvale Road, Ayr.  
2nd No. 26 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
3rd No. 27 Edmondson, R., Rothay, Hale Road, Ringway, Altrincham.  
V No. 30 Thoms, A. R. B., Springbank, George Street, Coupar-Angus.  
H No. 29 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.  
C No. 28 Keay, Mrs, Champions, Beaminster, Dorset.

**CLASS 7.** Six Jars of RUN or EXTRACTED MEDIUM or DARK-COLOURED HONEY, excluding Heather Honey, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 31 Allan, George C., 7 Springvale Road, Ayr.  
2nd No. 32 Anderson, Gordon, Home Farm, Mayne, Elgin.  
3rd No. 33 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
V No. 35 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.

**CLASS 8.** Six Jars of PRESSED HEATHER HONEY in liquid form, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 37 Hanslip, C. E., Glaisnock, Cumnock, Ayrshire.  
2nd No. 40 Pate, Thomas, Hopefield, Milnathort, Kinross-shire.  
3rd No. 36 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
V No. 41 Smith, Mrs G. C., Toll House, Kincardine O'Neil.  
H No. 42 Thoms, A. R. B., Springbank, George Street, Coupar-Angus.  
C No. 38 Mackenzie, Kenneth, The Gardens, Keithick, Coupar-Angus.  
C No. 39 Park, David C., Setonhill, Longniddry, East Lothian.

**CLASS 9.** Six Jars of GRANULATED HONEY, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 47 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
2nd No. 43 Allan, George C., 7 Springvale Road, Ayr.  
3rd No. 44 Anderson, Gordon, Home Farm, Mayne, Elgin.  
V No. 46 Duffton, Robert, 8 Macdonald Street, Huntly.  
H No. 45 Cumming, James A., North Middlemuir, Methlick, Aberdeen-shire.  
C No. 48 Mackie, A., 10 South Mount Street, Aberdeen.  
C No. 49 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
C No. 50 Pate, Thomas, Hopefield, Milnathort, Kinross-shire.

**CLASS 10.** Two Shallow Frames of COMB HONEY for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 51 Allan, George C., 7 Springvale Road, Ayr.  
2nd No. 53 Duffton, Robert, 8 Macdonald Street, Huntly.  
3rd No. 52 Anderson, Gordon, Home Farm, Mayne, Elgin.  
V No. 55 Park, David C., Setonhill, Longniddry, East Lothian.

**CLASS 11.** Best display of HONEY in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 40 lb.—PREMIUMS, 60s., 30s., and 20s.

1st No. 57 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

**CLASS 12.** Best exhibit of not less than 1 lb. of WAX in any form.—PREMIUMS, 20s., 15s., and 10s.

1st No. 60 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

2nd No. 59 Duffton, Robert, 8 Macdonald Street, Huntly.

3rd No. 63 Niven, H. L., 3 Monearn Terrace, Banchory.

V No. 58 Cant, W. A., Lawrenceton, Forres.

H No. 61 Hanslip, C. E., Glaisnock, Cumnock, Ayrshire.

C No. 62 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.

C No. 64 Park, David C., Setonhill, Longniddry, East Lothian.

C No. 65 Smith, Mrs G. C., Toll House, Kincardine O'Neil.

**CLASS 13.** Best exhibit of not less than 1 lb. of WAX made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration.—PREMIUMS, 20s., 15s., and 10s.

1st No. 69 Park, David C., Setonhill, Longniddry, East Lothian.

2nd No. 68 Niven, H. L., 3 Monearn Terrace, Banchory.

3rd No. 66 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

V No. 67 Hanslip, C. E., Glaisnock, Cumnock, Ayrshire.

**CLASS 14.** OBSERVATORY HIVE, with Queen and Bees—two or more frames.—PREMIUMS, 50s., 30s., and 20s.

1st No. 73 Porter, Andrew, Cleddans Stables, Airdrie.

2nd No. 70 Birrell, James, 24 King Street, Perth.

3rd No. 71 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

V No. 72 Fleming-Amos, Thomas, 212 Seaward Street, Glasgow, S. 1.

**CLASS 15.** OBSERVATORY HIVE, with Queen and Bees—one frame, no super.—PREMIUMS, 40s., 30s., and 15s.

1st No. 79 Porter, Andrew, Cleddans Stables, Airdrie.

2nd No. 80 Stark, John, 42 Main Street, Calderbank.

3rd No. 74 Birrell, James, 24 King Street, Perth.

V No. 75 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

H No. 76 Fleming-Amos, Thomas, 212 Seaward Street, Glasgow, S. 1.

## CONFINED TO SCOTTISH EXHIBITORS.

**CLASS 16.** One standard Frame of COMB HONEY for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

1st No. 81 Allan, George C., 7 Springvale Road, Ayr.

2nd No. 83 Park, David C., Setonhill, Longniddry, East Lothian.

**CLASS 17.** Six Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

1st No. 84 Allan, George C., 7 Springvale Road, Ayr.

2nd No. 88 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.

3rd No. 86 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.

V No. 87 Macdonald, D. G., Kinloch Gardens, Collessie, Fife.

H No. 85 Anderson, Gordon, Home Farm, Mayne, Elgin.

**CLASS 18.** Six Sections of HEATHER HONEY.—  
PREMIUMS, 30s., 20s., and 10s.

- 1st No. 89 Allan, George C., 7 Springvale Road, Ayr.  
 2nd No. 95 Tennent, Mrs J. N., 4 Clairmont Gardens, Glasgow, C. 3.  
 3rd No. 91 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
 V No. 92 Henry, Andrew, Nethy Brae, Nethy Bridge, Inverness-shire.  
 H No. 93 Park, David C., Setonhill, Longniddry, East Lothian.  
 C No. 90 Anderson, Gordon, Home Farm, Mayne, Elgin.  
 C No. 94 Paterson, James, Glen Dye, Strachan, Banchory.

**CLASS 19.** Six Jars of RUN or EXTRACTED MEDIUM or DARK-COLOURED HONEY, excluding Heather Honey, approximate weight 6 lb.—PREMIUMS, 30s., 20s., and 10s.

- 1st No. 106 Smith, William W., 71 High Street, Innerleithen.  
 2nd No. 103 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
 3rd No. 96 Allan, George C., 7 Springvale Road, Ayr.  
 V No. 100 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
 H No. 104 Park, David C., Setonhill, Longniddry, East Lothian.  
 C No. 105 Smith, Mrs G. C., Toll House, Kincardine O'Neil.

**CLASS 20.** Six Jars of PRESSED HEATHER HONEY in liquid form, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 109 Hanslip, C. E., Glaisnock, Cumnock, Ayrshire.  
 2nd No. 114 Thoms, A. R. B., Springbank, George Street, Coupar-Angus.  
 3rd No. 111 Pate, Thomas, Hopefield, Milnathort, Kinross-shire.  
 V No. 108 Duguid, Robert, Victoria Apiary, Cornhill, Banffshire.  
 H No. 110 Hutton, W. A., 44 Whirlbut Crescent, Dunfermline.  
 C No. 113 Smith, Mrs G. C., Toll House, Kincardine O'Neil.

**CLASS 21.** Six Jars of RUN or EXTRACTED LIGHT-COLOURED HONEY, approximate weight 6 lb.—PREMIUMS, 30s., 20s., and 10s.

- 1st No. 123 Smith, Mrs G. C., Toll House, Kincardine O'Neil.  
 2nd No. 115 Allan, George C., 7 Springvale Road, Ayr.  
 3rd No. 119 Duffton, Robert, 8 Macdonald Street, Huntly.  
 V No. 121 Macdonald, D. G., Kinloch Gardens, Collessie, Fife.  
 H No. 122 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
 C No. 116 Anderson, Gordon, Home Farm, Mayne, Elgin.

# RURAL INDUSTRIES

## OPEN CLASSES.

### SHETLAND KNITTING.

*(Exhibits made from Shetland Wool.)*

#### CLASS 1. FINE LACE SHAWL or SCARF.—

PREMIUMS, £3, £2, and £1.

- 1st No. 7 Sinclair, Mrs Jemima, Mid Ayre, Uyeasound, Lerwick (Scarf).
- 2nd No. 8 Smith, Miss Mary J., Skibhoul, Baltasound, Lerwick (Scarf).
- 3rd No. 1 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Scarf).

#### CLASS 2. FINE LACE GOODS OTHER THAN ABOVE.—

PREMIUMS, £3, £2, and £1.

- 1st No. 13 Inkster, Mrs J. J., Gardie, Uyeasound, Lerwick (Jumper).
- 2nd No. 21 Spence, Miss L. J., Dandies, Uyeasound, Shetland (Lady's Undervest).
- 3rd No. 22 Williamson, Miss Helen M., Everland, Fetlar, Shetland (Jumper).
- V No. 11 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Child's Frock).
- H No. 10 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Jumper).
- C No. 12 Hughson, Mrs Margaret, Dandies, Uyeasound, Lerwick (Jumper).
- C No. 14 Jamieson, Miss B. A., Gritquoy, Uyeasound, Lerwick (Child's Frock).

#### CLASS 3. JUMPER or CARDIGAN—with or without Sleeves.—

PREMIUMS, £3, £2, and £1.

- 1st No. 33 Jacobson, Miss Cara V., Stonydale, Bridge of Walls, Shetland (Jumper).
- 2nd No. 63 Smith, Miss Mary J., Skibhoul, Baltasound, Lerwick (Jumper).
- 3rd No. 45 Leslie, Miss Joan M., North House, Virkie, Shetland (Jumper).
- V No. 50 Peterson, Miss E., Bunidale, Vidlin, Shetland (Jumper).
- H No. 28 Goodlad, Miss Rubina, Meal Hamnavoe, Lerwick (Jumper).
- C No. 34 Jacobson, Miss M. W., Stonydale, Bridge of Walls, Shetland (Cardigan).

#### CLASS 4. EXHIBITS OTHER THAN ABOVE.—

PREMIUMS, £2, £1, and 10s.

- 1st No. 73 Brown, Miss M. J., Kingland, Ollaberry, Shetland (Shawl).
- 2nd No. 70 Abernethy, Mrs Maggie, Bretvold, North Roe, Northmavine, Shetland (Shawl).
- 3rd No. 76 Gardner, Miss Joan, Houll, Fetlar, Shetland (Scarf).
- V No. 74 Burgess, Miss Helen, Loch View, Scousburgh, Shetland (Three-piece Suit).
- H No. 81 Leslie, Miss Joan M., North House, Virkie, Shetland (Three-piece Suit).
- C No. 75 Cation, Mrs H., East Lodge, Poltalloch, Kilmartin, Argyll (Shawl).



**TWEEDS.****CLASS 5. HARRIS or OTHER TWEED—Hand-woven.—**  
PREMIUMS, £3, £2, and £1.

- 1st No. 97 MacLeod, Miss A. B., Rodfield, Brookman's Park, Hertfordshire.  
 2nd No. 91 Hogg, David, 10 High Street, Earlston, Berwickshire.  
 3rd No. 93 Johnson, James, Gateside, Levenwick, Shetland.  
 V No. 98 M'Leod, Mrs, Achillee, Rogart, Sutherland.  
 H No. 105 Ross, Mrs George K., Pirrentail, Rogart, Sutherland.  
 C No. 95 MacGregor, Robert, Paton Street, Inverness.  
 C No. 96 MacKay, Miss Margaret, Milton Mine, Rogart, Sutherland.  
 C No. 99 MacPhail, Miss Margaret, Minch View, Loch Eport, North Uist.

**CLASS 6. TARTAN—Vegetable-dyed and Hand-woven.—**  
PREMIUMS, £3, £2, and £1.

- 1st No. 108 MacGregor, Robert, Paton Street, Inverness.  
 2nd No. 109 Murray, Miss Margaret, Tressidy Hill, Laig.  
 3rd No. 107 MacGregor, Robert, Paton Street, Inverness.  
 V No. 110 Murray, Miss Margaret, Tressidy Hill, Laig.

**CLASS 7. CARRIAGE RUG or PLAID—Hand-woven.—**  
PREMIUMS, £3, £2, and £1.

- 1st No. 116 MacGregor, Robert, Paton Street, Inverness.  
 2nd No. 113 Biermann, Mrs Louis, Blairich, Rogart, Sutherland.  
 3rd No. 118 Murray, Miss Margaret, Tressidy Hill, Laig.  
 V No. 121 Ross, Mrs George K., Pirrentail, Rogart, Sutherland.  
 H No. 115 MacGregor, Robert, Paton Street, Inverness.  
 C No. 114 Hogg, David, 10 High Street, Earlston, Berwickshire.

**MISCELLANEOUS.****CLASS 8. HOOK-THROUGH FLOOR RUG (New Wool).—**  
PREMIUMS, £3, £2, and £1.

- 1st No. 141 Newton, Miss Mary, Ruskin Mount, Millom, Cumberland.  
 2nd No. 131 Davidson, Mrs William, Bailliewhirr, Whithorn, Wigtownshire.  
 3rd No. 126 Black, Miss Margaret, Hillside, Torphins, Aberdeenshire.  
 V No. 139 Metcalfe, Mrs, The Manse, Cawdor, Nairn.  
 H No. 133 Goodbrand, Miss Anabel, Viewmount, Banchory, Kincardineshire.  
 C No. 138 Meldrum, Miss Francis, Mains of Glassel, Aberdeenshire.

**CLASS 9. ANY OTHER VARIETY FLOOR RUG (New Wool).—**  
PREMIUMS, £3, £2, and £1.

- 1st No. 151 MacKean, Mrs, 53 Falcon Road, Edinburgh.  
 2nd No. 152 Roger, Miss Blanche K., Balgove, St Andrews.  
 3rd No. 150 Macbeth, Miss Ann, Patterdale, Penrith, Cumberland.  
 V No. 148 Dunlop, Miss M. S., Craigaploch, Castle Douglas.

**CLASS 10. SPECIMEN OF WHITE EMBROIDERY**—to be exhibited unwashed (Unframed).—PREMIUMS, £3, £2, and £1.

- 1st No. 161 Telfer, Miss I., Ottercaps, Kirkwhelpington, Newcastle-on-Tyne (Bedspread).  
 2nd No. 157 Leach, Mrs A., 18 Gayton Road, Harrow, Middlesex (Sampler Panel).  
 3rd No. 156 Irving, Mrs M., 1 Market Square, Stony Stratford (Tray Cloth).  
 C No. 155 Grieve, Mrs R., Charlecote, Fort William (Child's Frock).

**CLASS 11. SPECIMEN OF COLOURED EMBROIDERY**—Silk or Cotton (Unframed).—PREMIUMS, £3, £2, and £1.

- 1st No. 188 Thomson, Miss Mary, 10 Mansfield Avenue, Musselburgh (Panel).  
 2nd No. 168 Fawcett, Miss A. W., Rhumore, 127 Adamton Road, Prestwick (Fire Screen).  
 3rd No. 171 Hamilton, Miss Janet, Brucehaven, Dunfermline (Bedspread).  
 V No. 170 Fleming, Mrs James, Woodhouse, Kirtlebridge, Dumfriesshire (Cushion Square).  
 H No. 177 Lowes, Miss J., Harehope, Eglingham, Northumberland (Table Cloth).  
 C No. 165 Downey, Miss Mary J., The Whins, Kilrenny, Anstruther, Fife (Bedspread).  
 C No. 182 Seton, Miss Bessie, 16 Crofthead Road, Prestwick (Silk Nightdress).  
 C No. 187 Tayvallich W.R.I., Tayvallich, Argyll (Bedspread).

**CLASS 12. SPECIMEN OF COLOURED EMBROIDERY**—Woolwork (Unframed).—PREMIUMS, £3, £2, and £1.

- 1st No. 194 Downey, Miss Mary J., The Whins, Kilrenny, Anstruther, Fife (Panel).  
 2nd No. 195 Elliot, Mrs, Harchead, Cranshaws, Duns (Picture).  
 3rd No. 214 Reid, Miss Grizillia, Bnfield, Symington, Lanarkshire (Sampler).  
 V No. 201 Irving, Mrs M., 1 Market Square, Stony Stratford (Fire Screen).  
 H No. 198 Gourlay, Mrs Adeline, Kenbank, Dalry, Castle Douglas (Picture).  
 C No. 199 Grahame, Mrs, The Bungalow, Ruthven, Meigle, Perthshire (Fire Screen).  
 C No. 200 Grosset, Miss E. G., Glenorchy, Links Road, Leven, Fife (Picture).  
 C No. 210 M'Nicol, Mrs, Duchray Farm, Ayr (Clan Campbell Badge).

**CLASS 13. SPECIMEN OF OLD ENGLISH QUILTING**.—PREMIUMS, £3, £2, and £1.

- 1st No. 225 Wallace, Miss E. D., Sypland, Kirkcudbright (Handkerchief Sachet).  
 2nd No. 221 Duncan, Mrs, Parkhill, Arbroath (Cushion).  
 3rd No. 222 Irving, Mrs M., 1 Market Square, Stony Stratford (Cushion).

**CLASS 14. LEATHER GLOVES.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 235 Dunchurch and Thurlaston Women's Institute, Rugby.  
 2nd No. 240 Dunchurch and Thurlaston Women's Institute, Rugby.  
 3rd No. 245 Newton, Miss Mary, Ruskin Mount, Millom, Cumberland.  
 V No. 239 Dunchurch and Thurlaston Women's Institute, Rugby.  
 H No. 238 Dunchurch and Thurlaston Women's Institute, Rugby.  
 C No. 234 Downing, Mrs H. H., Knotwood Farm, Stony Stratford.

**CLASS 15. SPECIMEN OF LEATHER WORK OTHER THAN GLOVES.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 256 Ledbrook, Miss M. H., 133 Eastcote Road, Ruislip, Middlesex (Handbag).  
 2nd No. 253 Downing, Mrs H. H., Knotwood Farm, Stony Stratford (Handbag).  
 3rd No. 252 Clouston, Mrs H. W., 168 Queensferry Road, Rosyth, Fife (Handbag).  
 V No. 248 Belcher, Miss Nelly, Holmleigh, Claverdon, Warwick (Shopping Bag).  
 H No. 246 Bakewell, Mrs E. L., 15 Greville Road, Warwick (Handbag).  
 C No. 257 Ledbrook, Miss M. H., 133 Eastcote Road, Ruislip, Middlesex (Writing Case).

**CLASS 16. SPECIMEN OF HAND-PAINTED POTTERY.—PREMIUMS, £2, £1, and 10s.**

- 2nd No. 267 Blair, Mrs Catherine, See-Worthy, North Berwick (Vase).  
 3rd No. 269 Downey, Miss Mary J., The Whins, Kilrenny, Anstruther, Fife (Plaque).  
 V No. 270 Downey, Miss Mary J., The Whins, Kilrenny, Anstruther, Fife (Plaque).  
 H No. 272 Taggart, Miss Barbara, 139 King Street, Aberdeen (Biscuit Box).  
 C No. 273 Wight, Miss Betty, Glen House Studio, North Berwick (Bowl).

**CLASS 17. SPECIMEN OF BASKET WORK (Raffia not eligible).—PREMIUMS, £2, £1, and 10s.**

- 2nd No. 276 Rose, Frank, Kirkton, Balmerino, Wormit (Shopping Basket).  
 3rd No. 278 Smith, Mrs Mitchell, Bradyston, Murthly, Perthshire (Cane Stool).  
 C No. 277 Royal Mental Hospital, Aberdeen (Waste-paper Basket).

**CLASS 18. HOMESPUN YARN—2-3 cuts.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 282 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick.  
 2nd No. 287 Smith, Miss Jeannie, Gunnister, Uyeasound, Lerwick.  
 3rd No. 286 Smith, Miss Dollina, Gunnister, Uyeasound, Lerwick.  
 V No. 283 Dundas, Mrs D. J., Woodhouselea, Milton Bridge, Midlothian.  
 H No. 284 MacPhail, Mrs Annie, West End, Loch Eport, North Uist.  
 C No. 289 Cameron, Miss, Letterwalton, Barcaldine, Connel, Argyll.

**CLASS 19. SPECIMEN OF HAND-MADE LACE other than Crochet (Unframed).—PREMIUMS, £3, £2, and £1.**

- 1st No. 295 Rattray, Miss Janet, Muirdrum, Carnoustie (Point Lace).  
 2nd No. 299 Thomson, William, 10 Mansfield Avenue, Musselburgh (Lacis).  
 3rd No. 298 Thomson, Miss Jean, 10 Mansfield Avenue, Musselburgh (Lacis).  
 V No. 293 Hughson, Mrs Margaret, Dandies, Uyeasound, Lerwick (Lace).  
 H No. 294 MacKean, Mrs, 53 Falcon Road, Edinburgh (Narrow Lace).  
 C No. 291 Duncan, Mrs, Parkhill, Arbroath (Filet).

**CLASS 20. MEN'S GOLF or KILT HOSE.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 302 Crawford, Mrs H. C., Tayvallich, Lochgilphead, Argyll.  
 2nd No. 301 Cation, Mrs H., East Lodge, Poltalloch, Kilmartin, Argyll.  
 3rd No. 307 Gibson, Mrs Frederick, Balfunning, Balfon, Stirlingshire.  
 V No. 315 Melville, Miss A. S., Poltalloch Gardens, Kilmartin, Argyll.  
 H No. 313 Macdonald, Mrs D. G., Kinloch Gardens, Collessie, Fife.  
 C No. 300 Campbell, Mrs N., Poltalloch, Kilmartin, Argyll.

*CONFINED CLASSES.*

Open to Women's Rural Institutes and Members thereof in the whole of Scotland.

**CLASS 21. QUILT—PATCHWORK.—PREMIUMS, £3, £2, and £1.**  
 (No Award.)

**CLASS 22. ARTICLE SHOWING CROCHET LACE (Unframed).—PREMIUMS, £2, £1, and 10s.**

- 1st No. 323 Donaldson, Miss, Clovenfords, Galashiels, Selkirkshire (Tray Cloth).  
 2nd No. 330 Wilson, Miss Olivia Mary, Manse of Tealing, Dundee (Luncheon Set).  
 3rd No. 327 M'Dougall, Mrs, Post Office, Boreland, Lockerbie (Tea Cloth).  
 V No. 326 Kinnear, Mrs T., Jun., 16 John Street, Cellardyke, Anstruther (Tea Cloth).

**CLASS 23. SCARF—HAND-WOVEN.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 338 Sutherland, Miss Susan, Midbrae, Brae, Lerwick.  
 2nd No. 337 Morton, Miss Mary, Balgray, Tealing, Angus.  
 3rd No. 333 Don, Mrs John, Cray, Glenshee, Blairgowrie.  
 C No. 336 Matheson, Mrs Farquhar, Tigh-an-Stor, Arisaig, Inverness-shire.

**CLASS 24. FISHERMAN'S JERSEY.—PREMIUMS,**  
£3, £2, and £1.

- 1st No. 339 Anderson, Mrs, Jun., Mizpah, Portnockie.  
2nd No. 340 Jacobson, Miss J., c/o Mrs Roche, Ingaville, Scalloway,  
Shetland.

**CLASS 25. SOCKS, 4 ply, Plain Knitting.—**  
PREMIUMS, £2, £1, and 10s.

- 1st No. 369 Ross, Mrs Roderick, Cherry Bank, Whitehouse, Aberdeenshire.  
2nd No. 366 M'Queen, Mrs Gavin, Balgerran Dairy, Castle Douglas.  
3rd No. 351 French, Mrs G., Calliemuckie, Pluscardine, Elgin.  
V No. 343 Campbell, Mrs N., Poltalloch, Kilmartin, Argyll.  
H No. 362 Macdonald, Mrs D. G., Kinloch Gardens, Collessie, Fife.  
C No. 345 Duff, Mrs J., Tayness, Kilmartin, Argyll.

**CLASS 26. ARTICLE SHOWING SMOCKING.—**  
PREMIUMS, £2, £1, and 10s.

- 1st No. 374 Burns, Miss Elsie, The Lake, Kirkcudbright (Child's Dress).  
2nd No. 378 Grant, Miss B., Wester Logie, Blairgowrie (Pin-Cushion).  
3rd No. 377 Erskine, Miss G. M., Claymires Cottage, Newstead, Melrose  
(Set of Collar, Cuffs, and Hat).  
V No. 379 Rock, Mrs H. H., Irongray Manse, Dumfries (Child's Dress).

## HORTICULTURAL SECTION

The following were awarded Gold Medals :—

- No. 2 Dicksons & Co., 20 Charlotte Square, Edinburgh (Roses and Cut Flowers).
- No. 4 Smith, T., Daisy Hill Nursery, Newry, Northern Ireland (Hardy Plants and Shrubs).
- Nos. 6 and 7 Storrie, Thyne & Co., Ltd., Downfield Nurseries, Dundee (Collection of Fruits growing in Pots, and a Border of Hardy Herbaceous Perennials).
- No. 9 Oliver & Hunter, Hardy Plant Specialists, Moniaive, Dumfriesshire (Alpine and Herbaceous Flowers).
- No. 13 Dobbie & Co., Ltd., Seedsmen, Edinburgh (Dahlias, Roses, and Sweet Peas).
- No. 16 Allwood Bros., Wivelsfield Nurseries, Haywards Heath, Sussex (A display of Carnations, *Dianthus Allwoodii*, *Alpinus*, and Sweet Wivelsfield for the border or rockery).

The following were awarded Silver Medals :—

- No. 5 Forbes, John (Hawick), Ltd., Buccleuch Nurseries, Hawick (Phloxes, Pentstemons, and other cut Herbaceous Flowers).
- No. 10 Kelway & Son (1933), Ltd., Langport, Somerset (Pæonies).
- No. 11 Laird & Dickson, Pinkhill Nurseries, Edinburgh (Choice Plants for the Rock Garden).
- No. 12 Smith, W., & Son, Ltd., Hazelhead Nurseries, Aberdeen (Cut Flowers and Flowering Shrubs, &c.).
- No. 14 Sutton & Sons, Ltd., Reading (Sweet Peas).
- No. 18 Maxwell & Beale, Ltd., Broadstone, Dorset (Miniature Rock Garden on Tableting).

The following were commended :—

- No. 1 Castlehill Nurseries, Kippen, Stirlingshire (Table of Rock Plants).
- No. 3 Laurie, James, & Son, Blackness Nursery, Ninewells, Dundee (Alpine Plants).
- No. 8 D. S. & L. Co., Ltd., Shore, Perth (South African Fireberry Flowers and Decorative Grasses).
- No. 15 Edrom Nurseries, Edrom, Berwickshire (Alpines and Primulas).
- No. 17 Austin & M'Aslan, Ltd., 91-95 Mitchell Street, Glasgow, C. 1 (Polyantha Roses and Herbaceous and Alpine Plants).
- No. 19 Bakers, Codsall, near Wolverhampton (Delphiniums and Lupins).

# BUTTERMAKING COMPETITIONS

## CHAMPIONSHIP CLASS.

### *Gold Medal.*

No. 29 Arkley, Miss Jessie P., Kingsfield, Linlithgow.

### *Silver Medal.*

No. 44 Pullar, Miss Hannah, Duchlage Farm, Crieff.

## NOVICE CLASS—FIRST SECTION.

### PREMIUMS, £3, £2, and £1.

1st No. 8 Pullar, Miss Hannah, Duchlage Farm, Crieff.  
 2nd No. 3 Crichton, Ronald, 286 Wedderlea Drive, Glasgow.  
 3rd No. 2 Arkley, Miss Jessie P., Kingsfield, Linlithgow.  
 V No. 1 Allan, George P., 5 West Argyle Street, Helensburgh.  
 H No. 6 MacIntyre, Miss Dorothy M., 28 Deemount Gardens, Aberdeen.

## NOVICE CLASS—SECOND SECTION.

### PREMIUMS, £3, £2, and £1.

1st No. 16 Steele, Miss Kate F., Brae of Monzie, Crieff.  
 2nd No. 11 Francis, Geoffrey F., 48 Huddersfield Road, Barnsley.  
 3rd No. 18 Zimmerman, Miss Agnes, Blindwells, Guildtown, Perth.  
 V No. 15 Morgan, Thomas, Knaps, Longside, Aberdeenshire.  
 H No. 12 Greig, Allan, East Mains, Rossie, Montrose.

## OPEN CLASS—FIRST SECTION.

### PREMIUMS, £5, £3, £2, and £1.

1st No. 26 Murdoch, Miss Mary, Over Benchil, Stanley, Perthshire.  
 2nd No. 24 MacIntyre, Miss Dorothy M., 28 Deemount Gardens, Aberdeen.  
 3rd No. 20 Austin, Miss Gwynneth, Kilmorey Park Road, Newton, Chester.  
 4th No. 27 Reid, Miss Anne L. C., Balmossie, Broughty Ferry.  
 V No. 25 Morgan, Thomas, Knaps, Longside, Aberdeenshire.  
 H No. 19 Allan, George P., 5 West Argyle Street, Helensburgh.

## OPEN CLASS—SECOND SECTION.

### PREMIUMS, £5, £3, £2, and £1.

1st No. 30 Crichton, Ronald, 286 Wedderlea Drive, Glasgow.  
 2nd No. 31 Drake, Miss Margaret M., Middlerigg, Bathgate.  
 3rd No. 29 Arkley, Miss Jessie P., Kingsfield, Linlithgow.  
 4th No. 28 Adam, Miss Mary M., Burmieston, Methven.  
 V No. 32 Francis, Geoffrey F., 48 Huddersfield Road, Barnsley.  
 H No. 35 Steele, Miss Dorothy M. H., Ravelston Lea, Blackhall, Edinburgh.

OPEN CLASS—THIRD SECTION.

PREMIUMS, £5, £3, £2, and £1.

1st No. 44	Pullar, Miss Hannah, Duchlage Farm, Crieff.
2nd No. 45	Steele, Miss Kate F., Brae of Monzie, Crieff.
3rd No. 46	Stratton, Miss Mary A., Littleport Farm, St Fillans.
4th No. 38	Brown, Miss Margaret W., Cloag, Methven.
V No. 41	MacGregor, Miss Margaret H., Peterhead Farm, Gleneagles.
H No. 39	Gall, Christian J. W., Home Farm, Kininmonth, Aberdeen shire.

OPEN CLASS—FOURTH SECTION.

PREMIUMS, £5, £3, £2, and £1.

1st No. 48	Bauchope, Miss Henribell M. G., The Quinloch, Blanehead, Stirling.
2nd No. 56	Potter, Miss Margaret, Crossgreen Farm, Uphall.
3rd No. 51	Jackson, Miss Edna E., Bridge End, Lartan, Cockermouth.
4th No. 55	Potter, Miss Agnes, Crossgreen Farm, Uphall.
V No. 57	Russell, Miss Margaret K., Balsier, Sorbie, Wigtownshire.
H No. 53	Miller, Miss Jenny B., 89 Hermiston Road, Springboig, Glasgow.

OPEN CLASS—FIFTH SECTION.

PREMIUMS, £5, £3, £2, and £1.

1st No. 64	Prentice, Miss Janet W., Craigrie, Clackmannan.
2nd No. 65	Reid, Miss Isabel A. D., Lundie, Doune, Perthshire.
3rd No. 50	Brodie, Miss Barbara F., 10 Kingsburgh Drive, Paisley.
4th No. 61	Milne, Miss Edith, Dytach, Portsoy.
V No. 60	MacGillivray, Miss Mary M., Heatherlea, Torphins, Aberdeen-shire.
H No. 58	Campbell, Miss Mary F., Main Street, Port Charlotte, Isle of Islay.
C No. 63	Pickering, Miss Winifred, South View, Dacre, Penrith.

NOVICE CLASS—THIRD SECTION.

PREMIUMS, £3, £2, and £1.

1st No. 74	Pickering, Miss Winifred, South View, Dacre, Penrith.
2nd No. 76	Smith, Miss Jean R., Middleyard, Galston, Ayrshire.
3rd No. 72	Milne, Miss Edith, Dytach, Portsoy.
V No. 82	Gardner, John, Majeston Farm, Inverkip.
H No. 75	Russell, Miss Margaret K., Balsier, Sorbie, Wigtownshire.
C No. 71	MacGillivray, Miss Mary M. W., Heatherlea, Torphins, Aberdeenshire.

NOVICE CLASS—FOURTH SECTION.

PREMIUMS, £3, £2, and £1.

1st No. 83	Jackson, Miss Edna E., Bridge End, Lartan, Cockermouth.
2nd No. 85	MacLean, Miss Mary, Wester New Forres, Forres.
3rd No. 81	Gall, Christian J. W., Home Farm, Kininmonth, Aberdeen-shire.
V No. 86	Miller, Miss Jenny B., 89 Hermiston Road, Springboig, Glasgow.
H No. 80	Edmunds, Miss Nan E., Montrave Home Farm Dairy, Leven, Fife.
C No. 84	Lambie, Miss May A., Pilmuir Farm, Newton Mearns, Renfrewshire.



## SHOE-MAKING COMPETITION

Open to Shoeing-Smiths from any part of Great Britain,  
Northern Ireland, and Irish Free State.

1st Prize, £5 ; 2nd Prize, £4 ; 3rd Prize, £3 ;  
4th Prize, £2 ; 5th Prize, £1.

1st	No. 43	Brown, Robert, New Wynd Shoeing Forge, Montrose.
2nd	No. 4	Stephen, Ralph A., 19 Victoria Street, Montrose.
3rd	No. 22	Fenton, Robert, Old Montrose Smithy, Montrose.
4th	No. 28	Duncan, James, Cumminestown, Aberdeenshire.
5th	No. 32	Stephen, William, Benholm Smithy, Johnshaven.
V	No. 17	Stephen, William, 8 Auchreddie Road, New Deer.
H	No. 30	Barrie, James H. H., 18 Greenside Lane, Lanark.
C	No. 31	M'Rae, John, jun., Knowenack, Kirkmuirhill, Lanark.
C	No. 6	Wilson, Edmond, 72 West High Street, Inverurie.
C	No. 40	Sutherland, William B., Barrock Street, Thurso.
C	No. 27	Lyon, George R., 9 Commercial Road, Oldmeldrum.
C	No. 11	Nicol, Alexander, Muir of Alford, Aberdeenshire.
C	No. 2	M'Donald, Ian, Castle Smithy, Kintore
C	No. 23	M'Donald, Robert, The Smithy, Fintray, Dyce.

# HORSE-SHOEING COMPETITION

Open to Shoeing-Smiths from any part of Great Britain,  
Northern Ireland, and Irish Free State.

Gold Watch given by Messrs William Martin, Sons, & Co., Coatbridge, *to the winner of First Prize in Class 1.*

Gold Medal, given by National Master Farriers' and Blacksmiths' Association, *to be awarded to the competitor obtaining the highest number of points in Class 1.*

Canteen of Cutlery, given by Messrs Neilson & Cleland, Ltd., Coatbridge, *to the winner of Second Prize in Class 1.*

Gold Medal, given by the Mustad Horse Nail Company, *to the winner of Third Prize in Class 1.*

Gold Medal, given by Capewell Horse Nail Company, *to the winner of Fourth Prize in Class 1.*

**CLASS 1. FARM HORSES (Open Class).** 1st Prize, £5, Gold Watch, and Gold Medal; 2nd Prize, £5 and Canteen of Cutlery; 3rd Prize, £5 and Gold Medal; 4th Prize, £4 and Gold Medal; 5th Prize, £3; 6th Prize, £2; 7th Prize, £2; 8th Prize, £1; 9th Prize, £1.

- 1st No. 6 Ritchie, John, 19 Jopps Lane, Aberdeen.
- 2nd No. 18 Young, Matthew L., Pollokton, Newton Mearns.
- 3rd No. 20 Duffy, John, Milton Smithy, Glenluce.
- 4th No. 7 M'Donald, Robert, The Smithy, Fintray, Dyce.
- 5th No. 21 Borthwick, Richard, Mossend Smithy, Gorebridge.
- 6th No. 14 M'Rae, John, Jun., Knowenack, Kirkmuirhill, Lanark.
- 7th No. 8 Blackie, John, Ryslaw Smithy, Duns.
- 8th No. 37 Lyon, John W., 22 Oldmeldrum Road, Bucksburn.
- 9th No. 15 Stephen, William, 8 Auchreddie Road, New Deer.
- V No. 23 Barrie, James H. H., 18 Greenside Lane, Lanark.
- H No. 32 Stephen, William, Balmellie Street, Turriff.
- C No. 19 Callander, James, 109 High Street, Laurencekirk.

Silver Cigarette Case, given by the Scottish Iron and Steel Co., Ltd., Glasgow, *to the winner of First Prize in Class 2.*

Canteen of Cutlery, given by Messrs Neilson & Cleland, Ltd., Coatbridge, *to the winner of Second Prize in Class 2.*

Gold Medal, given by the Mustad Horse Nail Company, *to the winner of Third Prize in Class 2.*

**CLASS 2. FARM HORSES (for Competitors under twenty-five years of age)**—1st Prize, £5 and Silver Cigarette Case; 2nd Prize, £3 and Canteen of Cutlery; 3rd Prize, £2 and Gold Medal; 4th Prize, £1.

- 1st No. 62 Stephen, William, Benholm Smithy, Johnshaven.
- 2nd No. 64 Fenwick, David P., Balmuir Smithy, Mains, Dundee.
- 3rd No. 54 Wilson, Edmond, 72 West High Street, Inverurie.
- 4th No. 57 Nicol, Frank J., The Smithy, Torphins.
- V No. 58 Stephen, James, Craig Works, Laurencekirk.
- H No. 63 Keith, John, Tyrie Smithy, Tyrie Mains, Fraserburgh.
- C No. 53 Massie, James, Castlehill Smithy, Kintore.

## LIVE STOCK JUDGING COMPETITION

Open to all persons not exceeding 23 years of age at the date of the Competition.

'Glasgow Herald' Challenge Cup, value £50, to be awarded each year to the team winning the First Prize in the Team Competition. Given by Messrs George Outram & Co., Ltd., Glasgow.

West of Scotland Agricultural College (Ladies' Team) } equal, 246 points.  
West Perthshire Young Farmers' Club (Team C) }

Gold Medal to the highest individual scorer. Given by Messrs George Outram & Co., Ltd., Glasgow.

Walker, William R., Lochend, Wartle . . . . . 64 points.

### INDIVIDUAL COMPETITION.

PRIZES, £5, £4, £3, £2, and £1.

1st	Walker, William R., Lochend, Wartle . . . . .	64 points.
2nd	Biggar, William S., Grange Farm, Dalbeattie . . . . .	62
3rd	} equal { M'Intosh, James, Broombrae, Old Rayne, Inch . . . . .	60
4th		60
5th		60
V		58
	Aitken, G., Midbackburn, Stonehaven . . . . .	

### TEAM COMPETITION.

PRIZES, £10 and £5, and 10 Medium Silver Medals.

1st	} equal {	West of Scotland Agricultural College (Ladies' Team)	} 246 points.
2nd		West Perthshire Young Farmers' Club (Team C)	

Special Prize for College team placed highest in Competition, £5.

West of Scotland Agricultural College (Ladies' Team), 246 points.

## NEW IMPLEMENTS

The Judges, having inspected the new implements submitted for competition, awarded a Silver Medal to—

Allan, J. D., & Sons, Culthill Implement Works, Murthly—Grange Brake for Pneumatic-Tyred Carts or Vehicles (No. 1633).

## JUDGES.

*Shorthorn*—William Garne, Aldsworth, Cheltenham; Ralph S. MacWilliam, Garguston, Muir of Ord.

*Aberdeen - Angus*—Captain A. L. Goodson, Kilham, Mindrum, Northumberland; R. L. Grant, Bank House, Methlick.

*Galloway*—Peter Gordon, Baleraig, Port William.

*Belted Galloway*—J. B. Sproat, Lennox Plunton, Borgue.

*Highland Cattle*—Captain John MacGillivray of Calrossie, Nigg, Ross-shire.

*Ayrshire*—John Young, Mouswald Grange, Collin.

*British Friesian*—Alexander M'Intyre, Dunallan, Rothesay; G. B. Radcliffe, Pool Bank, Tarvin, Cheshire.

*Fat Cattle*—John B. Fowlie, Loanhead, New Deer.

*Dairy Cows*—Alexander M'Intyre, Dunallan, Rothesay; John Young, Mouswald Grange, Collin.

*Clydesdale Stallions and Colts*—Joseph A. Armstrong, The Beeches, Tarraby, Carlisle; Peter Dewar, Arnprior, Kippen.

*Clydesdale Geldings*—Robert Gilbert, Scotstoun, Inch; John Kerr, Red Hall, Wigton.

*Clydesdale Mares and Fillies*—James Dickie, Kelton House, Dumfries; Douglas D. Murray, The Dene, Seaham Harbour.

*Hunters*—James J. Paterson, Terrona, Langholm.

*Highland and Western Island Ponies*—Robert Inglis, Old Blair, Blair Atholl.

*Shetland Ponies*—David Dow, Rossie, Auchtermuchty.

*Saddle Classes*—James J. Paterson, Terrona, Langholm.

*Horses in Harness*—John Kerr, Red Hall, Wigton.

*Blackface*—William M. Clark, Kirkhouse Lodge, Traquair, Innerleithen; George Mundell, Kingledores, Broughton, Peeblesshire.

*Cheviot*—Joshua Murray, Corsebank, Sanquhar.

*Border Leicester*—John Jeffrey, Deuchrie, Dunbar; John Lindsay, Garrarie, Whithorn.

*Half-Bred*—John C. Brown, Hundalee, Jedburgh.

*Oxford Down*—R. H. Allan, Smailholm Mains, Kelso.

*Suffolk*—J. H. Brigg, Estate Office, Prior's Halton, Ludlow.

*Dorset Horn*—R. E. Bennett, Cheselbourne, Dorchester.

*Fat Sheep*—John C. Brown, Hundalee, Jedburgh.

*Goats*—Dr J. N. Pickard, Animal Breeding Research Department, King's Buildings, West Mains Road, Edinburgh.

*Large White*—W. Hallas, Bank House Farm, Helsby, via Warrington.

*Large Black*—D. W. P. Gough, Pakenham Manor, Bury St Edmunds.

*Poultry*—John Meikle, Camregan, Girvan—Classes 1 to 26, 53 to 63; H. S. Anthony, Euxton, Chorley, Lancs.—Classes 27 to 52, 78 to 102; A. H. Fox-Brockbank, The Croft, Kirksanton, Millom—Classes 64 to 77, 103 to 123.

*Dairy Produce*—Thomas Gilliland, c/o Scottish Co-operative Wholesale Society, Woodstock Street, Kilmarnock.

*Eggs*—Alexander F. Smith, Ardmohr, East Calder.

*Honey, &c.*—James Cunningham, 52 Bruntsfield Gardens, Edinburgh.

*Rural Industries*—Miss Bruce, 111A George Street, Edinburgh—Classes 1, 2, 3, 4, 5, 6, 7, 8, 9, 18, 20, 23, 24, 25; Miss A. D. Angus, Gray's School of Art, Robert Gordon's Colleges, Aberdeen—Classes 10, 11, 12, 13, 19, 21, 22, 26; Henry G. Paterson, 12 Dryden Place, Edinburgh—Classes 14, 15, 16, 17.

*Buttermaking Competitions*—William Smith, Naldera, Hailes Gardens, Colinton—Open Sections; David Wyllie, Hannah, Cummertrees, Annan—Novice Sections; William M'Fadzean, c/o A. M'Lelland & Sons, Ltd., Kilmarnock—Championship.

*Horse-shoeing and Shoe-making*—George Howie, F.R.C.V.S., 4 Albion Place, Aberdeen; Charles Macdonald, 21 Lindsay Avenue, Inverness; E. Martin, Sen., Closeburn Smithy, Dumfriesshire.

*Horticulture*—George Angus, 118 Glen-Urquhart Road, Inverness; John T. Jeffrey, 17 Graham Street, Edinburgh.

*Scottish Bacon Pig Competition*—E. E. Marsh (Marsh & Baxter Ltd.), Brierly Hill, Staffs.—Stage 1; Frank Lawson and Robert Lawson, Bacon Factory, Dyce—Stages 2 and 3.

## STEWARDS.

*Cattle*—James Durno, Crichtie, Inverurie.

*Horses*—George Grant of Glenfarclas, Blacksboat.

*Sheep, Goats, and Pigs*—James M'Laren, Cornton, Bridge of Allan.

*Poultry*—James R. Lumsden of Arden, Dumbartonshire.

*Forage*—John W. Prentice, Craigrie Farm, Clackmannan.

*Implements*—J. P. Ross-Taylor, Mungoswalls, Duns.

*Horticulture*—A. A. Hagart Speirs of Elderslie, Houston House, Renfrewshire.

*Special Events*—Alexander Murdoch, East Hallside, Cambuslang.

*Grand Stands*—Major Robert W. Sharpe of The Park, Earlstoun.

*Gates*—Ian M. Campbell, Bal Blair, Invershin.

*Catering, Bees, Honey, &c.*—John E. B. Cowper, Gogar House, Corstorphine, Edinburgh.

## ASSISTANT STEWARDS.

*Cattle*—Alexander Munro of Leanach, Culloden Moor, Inverness.

*Horses*—John P. Sleight of St John's Wells, Fyvie.

*Sheep, Goats, and Pigs*—John Hewetson, Baltersan, Newton Stewart.

*Forage*—T. Mercer Sharp, Bardrill, Blackford.

*Implements*—James Paton, Kirkness, Glencraig.

*Grand Stands*—Hon. Walter T. H. Scott, Master of Polwarth, Harden, Hawick.

*Gates*—James P. Brown, Dipple, Fochabers.

## ATTENDING MEMBERS.

**SHORTHORN.**—*J. P. Ross-Taylor, James Cruickshank, Robert Bruce, James M. Howie, William M. Morrison.*

**ABERDEEN-ANGUS.**—*John D. Allan, James Paton, John Fowle, James Smith, Patrick Strachan.*

**GALLOWAY.**—*John Hewetson, Major R. F. Brebner, Lieut.-Colonel Garden Beauchamp Duff, Robert Pittendreich.*

**BELTED GALLOWAY.**—*George Buchanan, Thomas Clark, David Anderson, William G. Macpherson.*

**HIGHLAND CATTLE.**—*Alexander Munro, Sir Hector D. Mackenzie, Bart., James Guthrie, George Herbert Russell.*

**AYRESHIRE.**—*Thomas Templeton, William P. Gilmour, James Argo, George Dawson, Alexander P. Watson.*

**BRITISH FRIESIAN.**—*William Anderson, J. Duthie Webster, Alexander Anderson, George Herbert Anderson, William Middler.*

**FAT CATTLE.**—*Captain Thomas Elliot, Alexander Reid.*

**CLYDESDALE STALLIONS AND COLTS.**—*Alexander Forbes, Charles W. Ralston, William Kemp, John L. Sleight, John Strachan.*

**CLYDESDALE GELDINGS.**—*Alexander Murdoch, George Buchanan, George Chalmers, Robert Gordon Young.*

**CLYDESDALE MARES AND FILLETS.**—*Sir Edmund Findlay, Bart., Treasurer Edward W. Watt, Andrew Spence, James Anderson, David R. Low, J. R. Moir.*

**HUNTERS.**—*Colonel F. J. Carruthers, Major Robert W. Sharpe, William L. Spalding, John Thomson, Baillie H. H. Ceiron Jones.*

**HIGHLAND AND WESTERN ISLAND PONIES.**—*J. E. Kerr, Lord Rowallan, Donald Fletcher, Major D. W. A. D. Mackenzie, D.S.O.*

**SHETLAND PONIES.**—*James Kilpatrick, Captain W. J. McHaffie, David Robertson, B.Sc., Ph.D.*

**SADDLE CLASSES.**—*The Earl of Home, K.T., Major Robert W. Sharpe, William L. Spalding, John Thomson.*

**HORSES IN HARNESS.**—*Alexander Murdoch, George Buchanan, George Chalmers, Robert Gordon Young.*

**BLACKFACE.**—*The Master of Polwarth, James Wyllie, Robert Carr, John Grant, Jun., William J. Reid.*

**CHEVIOT.**—*Phipps O. Turnbull, William Hunter, William Stoddart.*

**BORDER LEICESTER.**—*Major S. Strang Steel, Captain Charles McCombie, Colonel Harry Forbes, D.S.O.*

**HALF-BRED.**—*Captain John C. Stewart, James Cowie Innes.*

**OXFORD DOWN.**—*T. Mercer Sharp, Charles Cook.*

**SUFFOLK.**—*Alexander Clark, G. Clinton Chessor.*

**DORSET HORN.**—*John Reith, Sylvester Campbell.*

**FAT SHEEP.**—*Captain John C. Stewart, James Cowie Innes.*

**GOATS.**—*Dr T. G. Nasmyth, James B. Cannon.*

**LARGE WHITE.**—*George Argo, Alexander Thomson, George Wilson.*

**LARGE BLACK.**—*Gavin Ralston, Baillie J. Duncan MacDiarmid, George Morrison.*

**POULTRY.**—*Dr J. F. Tocher, Baillie Charles F. Benzie, Peter Duguid, Robert C. May.*

**DAIRY PRODUCE.**—*Dr A. E. Cameron, George S. Fraser.*

**EGGS.**—*Dr A. E. Cameron, George S. Fraser.*

**HONEY, &c.**—*Colonel William Lilburn, A. Aikman Blair, Baillie Alexander Riddell.*

**RURAL INDUSTRIES.**—*W. C. Moyes, Baillie John D. Munro, David Sinclair.*

**BUTTERMAKING COMPETITIONS.**—*T. G. Wilson, Miss J. Macdonald.*

**HORSE-SHOING AND SHOE-MAKING.**—*John E. B. Couper, George Buchanan, James Cruickshank, John Lyon, John Ritchie, Alexander Thomson.*

**HORTICULTURE.**—*Robert G. Duthie, Dean of Guild John Spencer.*

**SCOTTISH BACON PIG COMPETITION.**—*George A. Bruce, Robert W. L. McCaig.*

## VETERINARY DEPARTMENT.

## CLASS EXAMINATIONS, 1935.

Silver Medals were awarded to the following :—

## GLASGOW VETERINARY COLLEGE.

Chemistry . . . . .	James L. Shaw, Troon.
Chemistry . . . . .	Miss M. H. Weddell, Bearsden.
Biology . . . . .	Ian Blench, Bearsden.
Biology . . . . .	James L. Shaw, Troon.
Senior Anatomy . . . . .	D. J. Macaulay, Lochmaddy.
Junior Anatomy . . . . .	Charles M'Nulty, Wishaw.
Physiology . . . . .	Charles M'Nulty, Wishaw.
Zootechny . . . . .	George Wyse, Barrhead.
Materia Medica . . . . .	J. F. C. Swan, Kilmacollm.
Pathology . . . . .	J. F. C. Swan, Kilmacollm.
Hygiene . . . . .	John Birrell, Glenboig.
Hygiene and Dietetics . . . . .	J. F. C. Swan, Kilmacollm.
Surgery . . . . .	T. F. F. Barr, Biggar.
Surgery . . . . .	John J. Murdoch, Glasgow.
Medicine . . . . .	Dan M. Cochrane, Campbeltown.
Histology . . . . .	Charles M'Nulty, Wishaw.
Pharmacology . . . . .	D. S. Campbell, Greenock.

17 Large Silver Medals, £15, 14s. 6d.

## ROYAL (DICK) VETERINARY COLLEGE.

Chemistry . . . . .	J. H. Wilkins, Iraq.
Biology . . . . .	J. H. Wilkins, Iraq.
Senior Anatomy . . . . .	J. W. Whittick, Edinburgh.
Junior Anatomy . . . . .	J. J. Low, Brechin.
Physiology . . . . .	W. Clark, Keswick.
Zootechny . . . . .	T. E. Christie, Clandy.
Materia Medica . . . . .	J. W. Whittick, Edinburgh.
Pathology . . . . .	R. O. Muir, Bathgate.
Hygiene . . . . .	J. Norval, Clackmannan.
Surgery . . . . .	W. M. Brownlie, Oban.
Medicine . . . . .	W. M. Brownlie, Oban.

11 Large Silver Medals, £10, 3s. 6d.

## DISTRICT COMPETITIONS, 1935.

24	Districts—22 Grants of £12 each ; 1 of £11, 5s. ; and 1 of £10 .	£285	5	0
14	„ Grants of £15 each . . . . .	210	0	0
	Special Grants: Medals, £13, 4s. 6d. . . . .	195	12	6
	Medals for Shows (59 large) . . . . .	54	11	6
	Premiums and Medals for Cottages, Gardens, &c. . . . .	9	10	0
37	„ Medals for Hoeing Competitions, 1934-35 . . . . .	14	6	9
178	„ Medals for Ploughing, 1934-35 . . . . .	89	0	0
	Long Service Certificates, £32, 12s. 6d. ; Gold Medals, £49, 8s. ; and Silver Medals, £37, 16s. (1934-35) . . . . .	119	16	6
		<u>£978</u>	<u>2</u>	<u>3</u>

## ABSTRACT OF PREMIUMS.

District Competitions . . . . .	£858	5	9
Long Service Awards . . . . .	119	16	6
Veterinary Colleges (28 Medals) . . . . .	25	18	0
	<u>£1004</u>	<u>0</u>	<u>3</u>



## GLASGOW SHOW, 1934.

## ALTERATIONS IN PRIZE LIST.

On account of animals failing to comply with the Regulations as to calving and foaling, the following changes have taken place in the list of animals for which prizes were awarded :—

## CATTLE.

## ABERDEEN-ANGUS.

CLASS 17. COW or HEIFER, born on or after 1st December 1931, and before 1st December 1932.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 122 Kerr, J. E., of Harviestoun, Dollar, Heifer, "Julie Erica" (100,145).  
 2nd No. 119 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, Heifer, "Juva" (99,321).  
 3rd No. 117 Beddie, James, Banks, Strichen, Aberdeenshire, Heifer, "Romica of Banks" (98,846).  
 \* No. 118 Brown, John, Westerton, Killearn, Heifer, "Rosalind of Westerton" (99,025).  
 4th No. 120 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, Heifer, "Bettine of Doonholm" (100,117).

## BELTED GALLOWAY.

CLASS 30. HEIFER, born on or after 1st December 1931, and before 1st December 1932.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 236 Nalc Co., Limited (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Dandy IV." (3054 B).  
 2nd No. 234 Brown, J. Douglas, Corseyard, Kirkcudbright, "Knockbrex Jade" (3084 B).  
 \* No. 235 Nalc Co., Limited (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Christian II." (3050 B).  
 \* No. 237 Nalc Co., Limited (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, "Gartmore Edith I." (3058 B).  
 3rd No. 233 Brown, J. Douglas, Corseyard, Kirkcudbright, "Knockbrex Joy" (3102 B).  
 4th No. 239 Spruat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, "Boreland Irene" (3150 B).

*The animals failing to qualify are marked thus (\*).*

## RED POLL.

CLASS 58. HEIFER, born in 1932.—PREMIUMS, £10, £5, and £3.

- \* No. 491 Montrose, The Duchess of, Brodick Castle, Brodick, Arran, "Isle of Arran Sweet Briar" (49,560).
- 1st No. 492 Younger, James, Burradon Farm, Dudley, Northumberland, "Burradon Buttermilk 4th" (48,843).
- \* No. 490 Montrose, The Duchess of, Brodick Castle, Brodick, Arran, "Isle of Arran Santolina" (49,557).
- 2nd No. 489 Hogarth, Miss J. A., Strowan House, Crieff, "Strowan Clotilda 2nd" (50,368).

## HORSES.

## CLYDESDALE.

CLASS 75. YELD MARE, born before 1931.—PREMIUMS, £15, £9, £6, and £4.

- \* No. 586 Dalziel, Lord, P.C., Borgue House, Kirkcudbright, "Charm o' Borgue."
- \* No. 585 Beck, George M., The Lane, Ravenstonedale, Westmorland, "Lane Snowflake" (59,747).
- 1st No. 587 Lamont, John, Ardyne, Toward, Argyll, "Ardyne Smiling Duchess."
- \* No. 590 Taylor, Robert, Milton Hall, Brampton Junction, Cumberland, "Milton June" (60,188).
- \* No. 589 Robertson, Thomas, Townhead of Drumley, Annbank, "Charm of Townhead."
- \* No. 580 Gray, James, West Newhall, Kingsbarns, "Crawfordston Margaret" (58,510).

*The animals failing to qualify are marked thus (\*).*

# STATE OF THE FUNDS

## OF

### THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

As at 30th NOVEMBER 1935

<b>I. BRITISH GOVERNMENT SECURITIES—</b>			
£21,800 3½ per cent War Loan, at 105½	.	.	£22,999 0 0
£1,679, 18s. 4d. 2½ per cent Consolidated Stock, at 85	.	.	1,427 14 4
£17,900 3½ per cent Conversion Stock, at 107.	.	.	19,153 0 0
£2,500 3 per cent Do. do. at 104½.	.	.	2,612 10 0
			<hr/>
			£46,192 4 4
<b>II. HERITABLE BONDS—</b>			
£12,500 at Commissioners' Rates	.	.	12,500 0 0
<b>III. RAILWAY DEBENTURE AND PREFERENCE STOCKS—</b>			
£17,050 London and North-Eastern Railway			
Co. 3 per cent Debenture Stock, at 84	£14,322	0 0	
£11,554 Do. do. 4 per cent do., at 109	12,593	17 3	
£16,105 London Midland and Scottish Rail-			
way Co. 4 per cent Debenture Stock, at 110	17,715	10 0	
£1,500 Do. do. 4 per cent			
Preference Stock, at 82	1,230	0 0	
£703 Southern Railway Co. 4 per cent Deben-			
ture Stock, at 112	787	7 3	
£450 Do. do. 5 per cent Preference			
Stock, at 117½	528	15 0	
£112 Do. do. 5 per cent Guaranteed			
Stock, at 130½	146	3 2	
			<hr/>
			47,323 12 8
<b>IV. BANK STOCKS—</b>			
£5,365 0 0 Royal Bank of Scotland, at			
477 x.d.	£25,591	1 0	
£2,218 16 5 Bank of England, at 367½	8,154	3 3	
£1,110 18 4 Bank of Scotland, at 475	5,275	13 4	
2,850 "B" Shares, Barclays Bank, at 77s. 6d.	11,043	15 0	
			<hr/>
			50,064 12 7
<b>V. COLONIAL GOVERNMENT STOCKS—</b>			
£2,500 Dominion of Canada Registered 3½ per			
cent Stock (1930-50), at 102	£2,550	0 0	
£2,500 New South Wales Inscribed 5 per			
cent Stock (1935-55), at 102	2,550	0 0	
£2,000 Western Australia Inscribed 4 per			
cent Stock (1942-62), at 104	2,080	0 0	
£2,000 New Zealand Government 5 per cent			
Inscribed Stock (1946), at 111½	2,280	0 0	
£1,120 Victorian Government 3½ per cent			
Inscribed Stock (1929-49), at 161	1,181	4 0	
			<hr/>
			10,541 4 0
Carry forward	.	.	£166,621 13 7

	Brought forward	£166,621 13 7
VI. TEMPORARY LOAN—		
£5,500 on Loan to Edinburgh Corporation		5,500 0 0
VII. ESTIMATED VALUE of Building—		
8 Eglinton Crescent	£5,000 0 0	
VIII. ESTIMATED VALUE of Furniture, Paintings, Books, &c.	1,500 0 0	
		6,500 0 0
IX. ARREARS OF SUBSCRIPTIONS considered recoverable		258 8 6
X. BALANCES at 30th November 1935		1,360 11 11
	AMOUNT OF GENERAL FUNDS	£180,285 14 0
XI. SPECIAL FUNDS—		
TWEEDDALE GOLD MEDAL FUND—		
£605 London and North-Eastern Railway Co. 4 per cent Debenture Stock, at 109		£659 9 0
£100 3 per cent Local Loans Stock, at 96		96 0 0
		£755 9 0
FIFE AND KINROSS PERPETUAL GOLD CHALLENGE CUP FUND—		
£268 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£225 2 5	
£201 Do. do. 4 per cent First Guaranteed Stock, at 99½	199 19 11	
Sum on Deposit Receipt with British Linen Bank	42 10 8	
		467 13 0
PAISLEY PERPETUAL GOLD CHALLENGE CUP FUND—		
£802 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£673 13 7	
Sum on Deposit Receipt with British Linen Bank	92 9 11	
		766 3 6
RENFREWSHIRE PERPETUAL GOLD CHALLENGE CUP FUND—		
£668 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£561 2 5	
Sum on Deposit Receipt with British Linen Bank	85 7 7	
		646 10 0
WILLIAM TAYLOR MEMORIAL PRIZE FUND—		
£401 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£336 16 10	
Sum on Deposit Receipt with British Linen Bank	71 18 3	
		408 10 1
WILLIAM DUTHIE PERPETUAL SILVER CHALLENGE CUP FUND—		
£260 2½ per cent Consolidated Stock, at 85		221 0 0
THE JAMES ARCHIBALD PRIZE—		
£612, 1s. 6d. 3½ per cent War Loan, at 105½		645 14 9
KINMONTH GOLD QUAIICH FUND—		
£46, 18s. 6d. 3½ per cent War Loan, at 105½		49 4 10
BALANCES WITH BANKS at 30th November 1935		117 12 9
	AMOUNT OF SPECIAL FUNDS	£4,077 17 11

EDINBURGH, 27th December 1935.—As Auditor of the Highland and Agricultural Society of Scotland, I have examined the Securities for the Investments as detailed in the above States of Funds and have found them in order. The Titles to the Heritable Estate and the Bonds for Sums lent on Heritable Security are certified by the Society's Law Agents to be in order.

GEO. JAMES GREGOR, C.A.

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

EDINBURGH, 7th January 1936.

# **ABSTRACT of the ACCOUNTS of the HIGHLAND and**

## **CHARGE.**

1. BALANCES as at 30th November 1934				£2,490	4	3
2. ARREARS of Subscriptions outstanding at 30th November 1934				£269	12	6
Whereof due by Members who have compounded for life, and whose arrears are thereby extinguished					11	13 6
						257 19 0
3. INTERESTS AND DIVIDENDS—						
(1) Interests—						
On Heritable Bonds, less Income-tax				£351	3	6
On Railway Debenture and Preference Stocks, do.				1,849	14	3
On Colonial Government Stocks, do.				413	13	9
On British Government Stocks, do.				1,899	9	5
On Temporary Loans, do.				41	19	3
				£3,556	0	2
(2) Dividends on Bank Stocks, less Income-tax				1,377	7	0
						4,933 7 2
4. SUBSCRIPTIONS—						
Annual Subscriptions				£2,544	1	6
Life Subscriptions				1,229	1	0
						3,773 2 6
5. 'TRANSACTIONS'—Sales and Other Receipts					50	0 5
6. INCOME TAX repaid for year to 5th April 1935					1,225	14 3
7. BALANCE of Receipts from Glasgow Show, 1934					268	9 2
8. RECEIPTS from Aberdeen Show, 1935					18,407	11 10
9. N.D.D. EXAMINATION at Ayr, 1934—Refund of Expenses					182	16 5
10. INVESTMENTS sold					15,008	18 3
11. INVESTMENT repaid					2,500	0 0
SUM OF CHARGE				£49,098	3	3

EDINBURGH, 27th December 1935.—As Auditor of the Highland and Agricultural of the Society for the year ending 30th November 1935 and have found them to be Accounts I have prepared an Account of Charge and Discharge of the Intromissions 1935, of which the above is an Abstract.

EDINBURGH, 7th January 1936.

# AGRICULTURAL SOCIETY of SCOTLAND for Year 1934 1935.

## DISCHARGE.

<b>1. ESTABLISHMENT EXPENSES.—</b>		
Salaries and Wages and Allowance for Cleaning	£3,188 10 0	
Allowances to Mrs. Simpson and Mrs. Cowie	180 0 0	
Fen-duty, £22, 12s. 2d.; Rates and Taxes, £113, 0s. 9d.	185 12 11	
Coal, Gas, and Electric Light	80 8 5	
Insurances, £65, 4s. 11d.; Special Annuity Premium, £51, 3s. 0d.; Telephone and Telegrams, £71, 18s. 1d.; Repairs and Furnishings, £136, 11s. 2d.	324 17 11	
	£3,859 9 8	
<b>2. FEE to Auditor of Accounts for 1933-1934</b>	120 0 0	
<b>3. EDUCATION—</b>		
N.D.A. Examination	£57 8 6	
Forestry Examination	25 8 0	
<b>4. CHEMICAL DEPARTMENT—</b>		
Fee to Chemist	£100 0 0	
Analyses for Members and Expenses	262 3 5	
	362 3 5	
<b>5. VETERINARY DEPARTMENT—Medals to Students.</b>	25 18 0	
<b>6. DAIRY DEPARTMENT—N.D.D. Examination, 1934</b>	102 11 7	
<b>7. DAIRY DEPARTMENT, 1935—</b>		
Expenses of N.D.D. Examination held at Ayr	£253 11 1	
Less Entry Fees	123 18 0	
	129 13 1	
<b>8. INVESTIGATION of Poisonous Substances in Feeding-Stuffs</b>	12 12 8	
<b>9. £1000 Prize for New Implement—</b>		
(a) Awards	£450 0 0	
(b) Expenses	100 0 4	
	640 0 4	
<b>10. SOCIETY'S 'TRANSACTIONS'</b>	1,621 19 10	
<b>11. ORDINARY Printing, £407, 10s. 7d.; Advertising, £42, 7s. 3d.; Stationery, Books, &amp;c., £230, 2s.; Postages and Receipt Stamps, £131, 8s. 6d.</b>	811 8 3	
<b>12. SALARY to Consulting Engineers</b>	300 0 0	
<b>13. MISCELLANEOUS Payments</b>	301 2 8	
<b>14. BALANCE of Expenses in connection with Dundee Show, 1933</b>	5 5 0	
<b>15. BALANCE of Expenses in connection with Glasgow Show, 1934</b>	298 12 6	
<b>16. EXPENSES in connection with Aberdeen Show, 1935—</b>		
Premiums, £3741, 16s.; Medals, £103, 6s.; Expenses of Show, £13,900, 1s. 10d. (as per page 421)	17,801 2 10	
<b>17. PREMIUMS and Medals for Local Shows and District Competitions</b>	871 0 3	
<b>18. CERTIFICATES and Medals for Long Service</b>	119 14 0	
<b>19. EXPENSES in connection with visiting sites for future Shows and attending Meetings, &amp;c.</b>	61 7 9	
<b>20. SPECIAL GRANTS—</b>		
Animal Diseases Research Association, £200; Glasgow Veterinary College, £100; Scottish Agricultural Organisation Society, £100; Macaulay Institute for Soil Research, £500; Scottish Committee on Contagious Bovine Abortion, £333, 6s. 8d.; other Grants, £293, 3s.	1,326 9 8	
<b>21. TEMPORARY Loans</b>	3,500 0 0	
<b>22. INVESTMENT made—</b>		
Cost of £13,000 3½ per cent Conversion Loan	15,002 4 8	
<b>23. ARREARS removed from Subscription List at 30th November 1935</b>	98 5 0	
<b>24. ARREARS of Subscriptions outstanding at 30th November 1935</b>	253 8 6	
<b>25. BALANCES at 30th November 1935—</b>		
On Account Current with Royal Bank of Scotland—		
Edinburgh Account	£1,194 5 3	
London Account	100 0 8	
	1,360 11 11	
<b>SUM OF DISCHARGE</b>		£49,098 3 3

Society of Scotland, I beg to report that I have examined the Books and Accounts correctly stated and sufficiently vouched and instructed. From the Books and of the Treasurer with the Funds of the Society for the year ending 30th November

GEO. JAMES GREGOR, C.A.

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

## ABSTRACT of the ACCOUNTS

## CHARGE.

## 1 AMOUNT COLLECTED DURING SHOW—

Gates . . . . .	£8,120 6 1
Grand Stand . . . . .	2,123 3 6
Catalogues and Awards . . . . .	508 10 8
Tickets sold . . . . .	30 5 6
Chauffeurs' Tickets . . . . .	36 10 6
Cloak-Rooms and Lavatories . . . . .	98 9 5
	£10,912 5 8

2. FORAGE SOLD . . . . . 3 7 3

3. MOTOR ENCLOSURE . . . . . 456 7 5

## 4 RENT OF STALLS—

Implement and other Exhibits . . . . .	£3,669 15 0
Stock Exhibits . . . . .	2,112 5 0
	<hr/> 5,782 0 0

5. RENT OF REFRESHMENT BOOTH . . . . . 625 0 0

6. ADVERTISEMENTS IN CATALOGUE AND PREMIUM LIST . . . . . 343 12 0

7. SUBSCRIPTIONS IN AID OF PREMIUMS . . . . . 279 11 0

8. MISCELLANEOUS . . . . . 5 8 6

£18,407 11 10

Note — From the credit balance of . . . . . £585 0 9  
Deduct Premiums undrawn at 30th November 1935 . . . . . 166 6 6

£418 14 0

To the above balance there falls to be added sums due by  
Exhibitors for fitting up of stands, &c, amounting to . . . . . 226 5 5

Making the probable surplus . . . . . £644 19 5

of the ABERDEEN SHOW, 1935.

DISCHARGE.

1. SHOWYARD—

Fitting up of Showyard . . . . .	£2,174 0 0
Geo. Gordon & Co.—Hire of Timber . . . . .	3,387 9 4
Thomas Black & Sons Ltd.—Hire of Canvas . . . . .	1,502 15 11
Rosettes, £58, 14s. 9d.; Penning and Cartage Charges on Poultry, £52, 8s. 10d.; Horse Shoeing, £13, 19s. 6d.; Butter-making, £65, 0s. 8d.; Sheep Dog Demonstration, £24, 14s.; Electric Light and Power, £20, 0s. 0d.; Hire of Sleepers and Cartage, £192, 7s. 3d.; Office Luggage, £11, 11s. 10d.; Toilet Requisites, &c., £8, 9s. 2d.; Miscellaneous, £28, 15s. 2d.	476 0
Salary to John Reid, Showyard Erector . . . . .	500 0

£8,040 6 0

2. FORAGE AND BEDDING FOR STOCK . . . . . 391 9 6

3. POLICE . . . . . 181 8 8

4. TRAVELLING EXPENSES of Judges, Stewards, and Staff . . . . . 351 8 7

5. HOTELS AND LUNCHEONS—

Hotels for Directors, Stewards, and Judges . . . . .	£277 18 11
Luncheons in Showyard for Directors, Judges, Attending Members, Pressmen, Staff (including accommodation), Breakfasts, and Teas . . . . .	482 14 6

760 13 5

6. ASSISTANTS and Show Staff . . . . . 577 1 2

7. MUSIC and Military Display Teams . . . . . 619 10 8

8. PRINTING, Members' Badges, Stationery, &c. . . . . 1,450 1 0

9. ADVERTISING and Bill-posting . . . . . 924 12 11

10. FORESTRY Exhibition, £40; Bacon Pig Competition, £1, 19s. 10d.; Horticultural Section, £70, 5s. 3d.; Concert for Attendants, £5, 4s. 6d. . . . . 117 9 7

11. VETERINARY SURGEON . . . . . 21 0 0

12. SHOW TREASURER . . . . . 100 0 0

13. POSTAGES . . . . . 128 4 4

14. POST OFFICE and Telephones . . . . . 67 3 0

15. AMBULANCE . . . . . 15 8 6

16. INSURANCE . . . . . 113 14 3

17. MISCELLANEOUS . . . . . 96 10 3

£13,956 1 10

18. PREMIUMS drawn at 30th November 1935 . . . . . 3,866 9 4

£17,822 11 2

CREDIT BALANCE . . . . . 585 0 8

£18,407 11 10

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

GEO. JAMES GREGOR, C.A., Auditor.



# **ABSTRACT of the ACCOUNTS of the CHARGE.**

## **I. FUNDS as at 30th November 1934—**

£3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock . . . . .	£2,650 0 0
£5,551, 16s. 3d. 3½ per cent Conversion Stock . . . . .	4,216 18 2
£500 Queensland 3½ per cent Inscribed Stock, 1950-70 . . . . .	450 1 0
£412 London Midland and Scottish Railway Company 4 per cent Debenture Stock . . . . .	611 10 6
£190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock . . . . .	259 1 11
	<hr/>
	£8,187 11 7
BALANCE on Account Current with Royal Bank of Scotland . . . . .	364 2 9
	<hr/>
	£8,551 14 4

## **II. INTEREST ON INVESTMENTS—**

On £3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock, for year to 30th June 1935	£95 15 10
Less tax . . . . .	21 11 0
	<hr/>
	£74 4 10
On £5,551, 16s. 3d. 3½ per cent Conversion Stock, for year to 1st October 1935 . . . . .	£194 6 2
Less tax . . . . .	43 14 2
	<hr/>
	150 12 0
On £500 Queensland 3½ per cent Inscribed Stock, 1950-70, for year to 30th June 1935	£17 10 0
Less tax . . . . .	8 18 8
	<hr/>
	13 11 4
On £412 London Midland and Scottish Rail- way Company 4 per cent Debenture Stock, for year to 30th June 1935 . . . . .	£16 9 6
Less tax . . . . .	3 14 2
	<hr/>
	12 15 4
On £190 London Midland and Scottish Rail- way Company 4 per cent Guaranteed Stock, for year to 30th June 1935 . . . . .	£7 12 0
Less tax . . . . .	1 14 2
	<hr/>
	5 17 10
	<hr/>
	257 1 4

III. INTEREST ON DEPOSIT RECEIPT . . . . . 1 10 4

IV. INCOME-TAX repaid for year to 5th April 1935 . . . . . 74 12 2

SUM OF CHARGE . . . . . £8,884 18 2

## ARGYLL NAVAL FUND for the Year 1934-1935.

## DISCHARGE.

## I. ALLOWANCES to the following seven Recipients—

J. H. Dundas (sixth year) . . . . .	£40 0 0
K. C. Grieve (sixth year) . . . . .	20 0 0
D. B. N. Mellis (sixth year) . . . . .	40 0 0
C. D. Madden (third year) . . . . .	40 0 0
D. V. M. Macleod (second year) . . . . .	40 0 0
N. D. Campbell (second year) . . . . .	40 0 0
R. L. Alexander (first year) . . . . .	40 0 0
	<hr/>
	£260 0 0

## II. MISCELLANEOUS—

John Menzies & Co.—Advertising vacancies . . . . .	8 13 0
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## III. FUNDS at 30th November 1935—

£3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock . . . . .	£2,650 0 0
£5,551, 16s. 3d. 3½ per cent Conversion Stock . . . . .	4,216 18 2
£500 Queensland 3½ per cent Inscribed Stock, 1950-70 . . . . .	450 1 0
£412 London Midland and Scottish Railway Company 4 per cent Debenture Stock . . . . .	611 10 6
£190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock . . . . .	259 1 11
	<hr/>
	£8,187 11 7

*Note.*—The above Funds are entered at cost price. The market value at 30th November 1935 was £9,778, 13s. 3d.

## Balances with Royal Bank of Scotland—

On Account Current . . . . .	£252 3 3
On Deposit Receipt . . . . .	176 10 4
	<hr/>
	428 13 7
	<hr/>
	8,616 5 2

SUM OF DISCHARGE . . . . .	£8,884 18 2
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HOME, *Treasurer.*F. J. CARRUTHERS, *Hon. Secretary.*GEO. JAMES GREGOR, C.A., *Auditor.*

## VIEW OF RECEIPTS AND PAYMENTS for Year 1934-1935.

## RECEIPTS.

1. ANNUAL SUBSCRIPTIONS AND ARREARS received . . . . .	£2,450	7	0
2. LIFE SUBSCRIPTIONS . . . . .	1,229	1	0
3. INTERESTS AND DIVIDENDS—			
Interests . . . . .	£3,556	0	2
Dividends . . . . .	1,377	7	0
		4,933	7 2
4. 'TRANSACTIONS'—Sales and other Receipts . . . . .		50	0 5
5. INCOME-TAX repaid for year to 5th April 1935 . . . . .		1,225	14 3
6. BALANCE OF RECEIPTS from Glasgow Show, 1934 . . . . .		268	9 2
7. RECEIPTS from Aberdeen Show, 1935 . . . . .		18,407	11 10
8. N.D.D. EXAMINATION at Ayr, 1934—Refund of Expenses . . . . .		182	16 5
		£28,747	7 3

## PAYMENTS.

1. ESTABLISHMENT EXPENSES—			
Salaries and Wages and Allowance for Cleaning	£3,188	10	0
Retiring Allowances . . . . .	130	0	0
Fen-duty, Taxes, Coal, Gas and Electric			
Light, Insurance, Repairs, and Furnishings	540	19	3
	£3,859	9	3
2. FEE TO AUDITOR of Accounts, 1933-1934 . . . . .	120	0	0
3. EDUCATION—N.D.A. and Forestry . . . . .	112	16	6
4. CHEMICAL DEPARTMENT . . . . .	362	3	5
5. VETERINARY DEPARTMENT . . . . .	25	18	0
6. DAIRY DEPARTMENT—N.D.D. Examination, 1934 . . . . .	102	11	7
7. DAIRY DEPARTMENT—N.D.D. Examination, 1935 . . . . .	129	13	1
8. SOCIETY'S 'TRANSACTIONS' . . . . .	1,621	19	10
9. INVESTIGATION OF POISONOUS SUBSTANCES in			
Feeding-Stuffs . . . . .	12	12	8
10. £1000 Prize for New Implement . . . . .	640	0	4
11. ORDINARY Printing, Advertising, Stationery,			
Books, and Postages . . . . .	811	8	3
12. SALARY to Consulting Engineers . . . . .	300	0	0
13. MISCELLANEOUS Payments . . . . .	301	2	8
14. BALANCE OF PAYMENTS on account of Dundee			
Show, 1933 . . . . .	5	5	0
15. BALANCE OF PAYMENTS on account of Glasgow			
Show, 1934 . . . . .	298	12	6
16. PAYMENTS on account of Aberdeen Show, 1935—			
1. Premiums and Medals . . . . .	£3,845	1	0
2. Expenses . . . . .	13,956	1	10
	17,801	2	10
17. PREMIUMS AND MEDALS for Local Shows and Dis-			
trict Competitions . . . . .	871	6	3
18. CERTIFICATES AND MEDALS for Long Service . . . . .	119	11	0
19. EXPENSES in connection with visiting Sites for			
future Shows, attending Meetings, &c. . . . .	61	7	0
20. SPECIAL GRANTS—			
Animal Diseases Research Association, £200;			
Glasgow Veterinary College, £100; Scottish			
Agricultural Organisation Society, £100;			
Macaulay Institute for Soil Research,			
£500; Scottish Committee on Contagious			
Bovine Abortion, £333, 6s. 8d.; other			
Grants, £93, 3s. . . . .	1,326	9	8
		28,883	13 7
BALANCE OF PAYMENTS . . . . .		£136	6 4

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

GEO. JAMES GREGOR, C.A., Auditor.

EDINBURGH, 7th January 1936.

## PROCEEDINGS AT BOARD MEETINGS.

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### MEETING OF DIRECTORS, 3RD APRIL 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlee, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Mr Ian M. Campbell; Mr Alexander Clark; Mr Thomas Clark; Mr John E. B. Cowper; Mr James Durno; Captain Thomas Elliot; Mr W. P. Gilmour; Mr George Grant; Mr John Hewatson; Mr James R. Lunsdon; Sir Hector D. Mackenzie, Bt.; Mr James M'Laren; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Major S. Strang Steel; Captain John C. Stewart; Mr Thomas Templeton; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wyllie. *Extraordinary Directors*—Mr John D. Allan; Mr William Anderson; Mr George Argo; Mr George A. Bruce; Sir Edmund Findlay, Bt.; Mr J. E. Kerr; Mr Robert Macmillan; Mr John Reith; Mr J. P. Ross-Taylor; Mr T. Mercer Sharp; Major R. W. Sharpe; Mr John P. Sleigh; Mr Andrew Spence; Mr J. Duthie Webster. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—J. F. Toehor, D.Sc., F.I.C. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c.

#### *Letters.*

The following letters were submitted :—

*Royal Ulster Agricultural Society*.—Expressing thanks for the support rendered to that Society by adopting, at last Meeting, a Resolution respecting Live Stock from the Irish Free State being admitted duty free into Great Britain and Northern Ireland for exhibition at Agricultural Shows. Copies of the Resolution had been forwarded to the Chancellor of the Exchequer, the Secretary of State for Home Affairs, and the Secretary of State for the Dominions, and their acknowledgments were also submitted.

*Department of Agriculture for Scotland*.—Intimating that an International Horse Show would be held at Merano, Italy, from 14th to 23rd April 1935.

#### *Aberdeen Show, 1935.*

*Catering*.—A Minute of Meeting of Catering Committee, dated 3rd April, was submitted and approved.

The Minute recommended that the official catering in the Directors' Private Luncheon Room, for Directors and Judges, &c., be placed in the hands of the Royal Athenaeum, Aberdeen.

*Competition for Eggs*.—A letter was submitted from the Department of Agriculture for Scotland, requesting permission to hold a Competition for Eggs, instead of Tomatoes, at the Show this year. The Competition would be confined to Registered Packers under the Scottish National Mark Scheme, and would be for

case lots packed in terms of the Scheme. The Competition would not conflict in any way with the Classes for Eggs provided by the Society. It was decided that permission be granted, as requested.

*Lady Members' Pavilion.*—It was decided that, in future, the Lady Members' Pavilion in the Showyard be reserved exclusively for the use of Lady Members.

#### *Show of 1937.*

A letter was submitted from the Town Clerk of Stirling stating that the Provost's Committee would be glad to meet with the Society's Committee on a day and hour to be arranged.

It was decided that the Sites Committee should visit Bridge of Allan and Alloa on Monday, 22nd, and Stirling on Tuesday, 23rd April.

#### *Forestry Examination.*

It was reported that an Examination for the Society's First and Second Class Certificates in Forestry had been held on 12th, 13th, and 14th March, when two candidates presented themselves for examination. Both candidates were successful in securing the First-Class Certificate.

#### *Importation of Breeding Cattle.*

A letter was submitted from the Ministry of Agriculture and Fisheries, with reference to the importation of Canadian cattle for breeding purposes, forwarding copy of a question asked by Lieut.-Colonel Moore in the House of Commons on 28th February, together with the Minister's reply thereto.

In his reply, the Minister of Agriculture stated that he had received representations on the subject from the Ayrshire Cattle Herd-Book Society and other Scottish Societies, and he understood that the Scottish Agricultural Advisory Committee were now considering the whole matter. As at present advised, however, he doubted whether any useful purpose would be served by requiring the tests or guarantee suggested. Apart from the point that the absence of reaction to a single test would not necessarily indicate freedom from disease, there was no reason to believe that the diseases mentioned were more prevalent among imported cattle than in native stock in this country.

After some discussion, Mr T. G. Wilson said, with regard to the question of disease, that Canadian cattle coming into this country required to pass the Tuberculin Test and the Agglutination Test for Abortion before they left Canada. The Canadians insisted that cattle going from this country into Canada should pass the test on arrival; they were not prepared to accept the certificate given by a veterinary surgeon in this country. All that they were asking was that conditions of export of cattle from this country to Canada should be no more stringent than the conditions of importation of Canadian cattle into this country. He did not think it was necessary for them to do anything further, as he believed their representations had not fallen on stony ground. They had no reason to regret the attitude they had taken up.

It was agreed to take no further action in the meantime.

#### *Elworm in Potatoes.*

A letter was submitted from the Department of Agriculture for Scotland, forwarding Notes of the Proceedings at the Conference held on 31st January, giving a statement of the views expressed by the various representatives of Agricultural bodies which attended, together with a Memorandum giving a description of the disease and the sources of infection.

The letter further invited the Society to appoint a representative to act upon a committee which it had been decided to set up to consider Dr Salaman's Scheme for the raising of Virus-Free Potato Stocks.

It was decided to recommend that Mr John E. B. Cowper, Gogar House, Corstorphine, be nominated to represent the Society on this Committee.

#### *Eradication of Bracken.*

A letter was submitted from the National Farmers' Union of Scotland, inviting the Society to co-operate with that body, and other Agricultural bodies, in repre-

sending to the Secretary of State for Scotland the urgent need for Government assistance in the eradication of bracken.

It was agreed that the Chairman of Directors and Captain Thomas Elliot be nominated to represent the Society at any conference on the subject which may take place with the Secretary of State for Scotland.

### *Finance.*

A Minute of Meeting of Committee, dated 3rd April, was submitted and approved.

The Minute dealt with the following matters:—

*International Commission of Agricultural Associations at Rome.*—Letters had been submitted from the President of the Association, forwarding copy of the first volume of the International Guide of Agricultural Societies, and requesting a donation to the Association's funds. A donation of £5 was given by the Society on one former occasion—December 1929. It was recommended that a donation of £5 be given at the present time.

*Library.*—The Secretary had reported the gift, by Mr John M. Aitken, The Hill, Lockerbie, of nine works on Agriculture, of which a list was submitted. The Secretary was instructed to thank Mr Aitken, and express the Society's appreciation of this generous gift of books to the Society's Library.

*Dairy School, Auchincruive.*—It was recommended that a grant of £25 be given to the Dairy School, Auchincruive, towards the cost of providing tables and chairs for the large Lecture Room. This room is used by the Society on the occasion of the Annual Examination for the National Diploma in Dairying, and in the past it had been found necessary to hire these furnishings.

*Jubilee of His Majesty The King.*—The Committee had decided to suggest to the Board of Directors that a Loyal Address be presented to His Majesty The King on the occasion of the forthcoming Jubilee of his Accession to the Throne. In the event of the suggestion being adopted, it was further recommended that it be remitted to the Chairman, Treasurer, and Honorary Secretary, along with the Secretary, to draw up the terms of the Address, and arrange for its suitable execution in preparation for signature at next Meeting of the Board.

### MEETING OF DIRECTORS, 1st MAY 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlee, Moniaive, in the Chair.

*Present.—Ordinary Directors.*—Major R. F. Brobner; Mr George Buchanan; Mr Alexander Clark; Mr John E. B. Cowper; Mr James Durno; Captain Thomas Elliot; Mr Alexander Forbes; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr John Hewetson; Mr James R. Lumsden; Mr James M'Laren; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr Thomas Templeton; Mr T. G. Wilson; Mr James Wyllie. *Extraordinary Directors.*—Mr John D. Allan; Mr James Cruickshank; Mr J. E. Kerr; Mr James Kilpatrick; Mr Robert Macmillan; Mr J. P. Ross-Taylor; Mr T. Mercer Sharp; Major R. W. Sharpe. *Treasurer.*—The Earl of Home, K.T. *Honorary Secretary.*—Colonel F. J. Carruthers of Dormont. *Assistant Consulting Engineer.*—John B. Todd, B.Sc., Ph.D., &c.

### *Loyal Address to His Majesty The King.*

As agreed upon at last Meeting, the following Loyal Address to His Majesty the King, on the occasion of the Jubilee of his Accession to the Throne, had been prepared, and was submitted. The terms thereof were approved, and it was signed on behalf of the Society by the President, the Chairman of Directors, and the Secretary.

The Address was in the following terms:—

UNTO THE KING'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY.—

WE, Your Majesty's most dutiful and loyal subjects, the Highland and Agricultural Society of Scotland, incorporated by Royal Charter, humbly

desire to approach Your Majesty with an expression of our heartiest congratulations and warmest good wishes on the occasion of the Twenty-fifth Anniversary of the Accession of Your Majesty and Your Majesty's Royal Consort Queen Mary to the Throne.

We hold in grateful recollection Your Majesty's unceasing and devoted service to the Nation during the past twenty-five years, and the unabated courage and fortitude displayed by Your Majesty and our Gracious Queen during a most critical period of the Nation's history.

We would acknowledge with grateful appreciation the practical and sympathetic interest Your Majesty has always manifested in the well-being of Agriculture. In particular, we recall with renewed gratitude the honour Your Majesty conferred upon the Society by graciously consenting to accept the office of President in the year 1894, by Your Majesty's presence at the Society's Show held in Aberdeen that year, and by the presence of Your Majesty and Her Majesty Queen Mary at the Society's Show in Edinburgh in 1907.

Your Majesty's gracious action in extending Royal Patronage to the Society, prior to the holding of the Society's Hundredth Show in 1931, exerted a quickening influence in the life and work of the Society, and was warmly appreciated by its 10,000 members.

We desire to convey to Your Majesty an expression of our affectionate attachment and loyal devotion to Your Majesty's person and Throne and to Your Majesty's Royal Consort our beloved Queen Mary, and we fervently pray to Almighty God that Your Majesties may long be spared in health and strength to rule over a prosperous, loyal and united people.

Sealed with the corporate Seal of the Society, and signed on its behalf by The Right Honourable The Earl of Caithness, C.B.E., President, Robert Macmillan, Chairman of the Board of Directors, and John Stirton, Secretary, this 1st day of May 1935.

CAITHNESS, *President.*

R. MACMILLAN, *Chairman of Board of Directors.*

JOHN STIRTON, *Secretary.*

#### *Proposed Amendment of Rule 30.*

In the unavoidable absence of Sir Edmund Findlay, Bt., the following motion, of which he had given notice and the terms of which appeared on the Agenda, was moved by Mr J. P. Ross-Taylor, Mungoswells, Duns :—

“That the following words in Rule 30, ‘no cattle or sheep which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes,’ be amended so as not to apply to cattle.”

The motion was seconded by Mr George Grant of Glenfarclas, Blacksoat.

After considerable discussion, it was eventually moved, as an amendment, by Major R. F. Brebner, The Leuchold, Dalmeny, and seconded by Lord Rowallan, that the Rule remain as at present, but that, in respect of its application to Cattle, the following words be added: “Until one year after being so shown, and then only with Calf at Foot.”

Mr Ross-Taylor, with the consent of his Seconder, then agreed to withdraw the motion, and the Amendment, as above, became the finding of the Meeting.

#### *Eelworm in Potatoes.*

The letter from the Department of Agriculture for Scotland, with accompanying Memorandum regarding Eelworm and methods of control, was again submitted with a view to ascertaining if any member of the Board had any observations or recommendations to make thereon.

On the suggestion of Mr John E. B. Cowper, Gogar House, Corstorphine, the Secretary was instructed to reply that no member of the Board of Directors had any actual experience of Eelworm in Potatoes, and it was accordingly felt that the matter was one to be dealt with by those having such experience or by Scientists.

*Animal Diseases Research Association.*

An application from the Animal Diseases Research Association for a renewal for the current year of the grant of £200, which had been given for the past nine years, was submitted.

On the recommendation of the Finance Committee, it was decided that the application be granted.

*Glasgow Veterinary College.*

An application from the Glasgow Veterinary College for a renewal for the current year of the grant of £100, which had been given for the past five years, was submitted.

On the recommendation of the Finance Committee, it was decided that the application be granted.

*Long Service Awards.*

Mr John Howatson, Balforsan, Newton-Stewart, raised a question with regard to the conditions of award of the Society's Medals and Certificates for Long Service. He pointed out that, in different parts of the country, it was understood that the Regulations required that the term of service should be continuous.

After some discussion, it was decided to add the following words to the Regulations: "not necessarily continuous."

*Show of 1937.*

The Secretary reported that the Sites Committee had visited and inspected sites at Bridge of Allan, Alloa, and Stirling, on Monday and Tuesday, the 22nd and 23rd April. In connection with this, he submitted a letter from the Town Clerk of Alloa, inviting the Society to hold the Show there in 1937, and stating what the Council was prepared to do in the way of providing a free site, water, and other public services.

The Committee was not yet in a position to report on the results of their visits, but hoped to do so at next Meeting.

MEETING OF DIRECTORS, 5TH JUNE 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhain, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brehmor; Mr George Buchanan; Mr Thomas Clark; Mr John R. B. Cowper; Mr James Durno; Mr Alexander Forbes; Mr W. P. Gilmour; Mr George Grant; Mr John Howatson; Mr James R. Luncheon; Sir Hector D. Mackenzie, Bt.; Mr James M'Laren; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr Charles W. Ralston; Mr Gavin Ralston; Captain John C. Stewart; Mr Thomas Tompleton; Mr T. G. Wilson. *Extraordinary Directors*—Mr John D. Allan; Mr George Argo; Mr James P. Brown; Mr George A. Bruce; Mr James Cruickshank; Sir Edmund Findlay, Bt.; Mr J. E. Kerr; Mr Robert Macmillan; Mr J. P. Ross-Taylor; Major R. W. Sharpe; Mr John P. Sleight; Mr J. Duthie Webster. *Treasurer*—The Earl of Home, K.T. *Chemist*—J. F. Tochor, D.Sc., F.I.C. *Consulting Engineer*—Professor R. Stanford, A.R.S.M., &c. *Assistant Consulting Engineer*—John B. Todd, B.Sc., Ph.D., &c.

*Loyal Address to His Majesty The King.*

The following letter from the Under-Secretary of State for Scotland was read:—

SCOTTISH OFFICE, WHITEHALL, S.W.1.  
8th May 1935.

SIR,

I am directed by the Secretary of State to say that he has been commanded by The King to convey to you His Majesty's thanks for the loyal and dutiful Address from the Highland and Agricultural Society of Scotland on the



completion of the Twenty-fifth Year of His Majesty's Reign, and to assure you that His Majesty deeply appreciates the sentiments of loyalty and affection to which it gives expression. His Majesty was graciously pleased to take note of the artistic character of the Address.—I am, Sir, Your obedient Servant,

JOHN JEFFREY.

The Secretary,  
Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent, Edinburgh 12.

#### *Melrose Show, 1936.*

*Date of Show.*—The Secretary reminded the Meeting that the fixing of the date of the Show at Melrose in 1936 was considered at last Meeting, when it was decided to delay arriving at a definite decision until that Meeting, when it was expected the date of the Royal Show at Bristol would be known. He had been in communication with the Secretary of the Royal Agricultural Society, from whom he had received a wire on the preceding day stating that the dates fixed for the Show at Bristol in 1936 were 30th June to 4th July.

After full discussion, it was moved by Mr Alexander Murdoch, East Hallside, Cambuslang, and seconded by Mr J. P. Ross-Taylor, Mungoswells, Duns, that the Show at Melrose, in 1936, be held from the 23rd to 26th June inclusive, and this was agreed to.

*Railway Arrangements.*—A Minute of Meeting of the Special Committee appointed on 7th November last was submitted and approved.

The Minute stated that a letter had been received from the Divisional General Manager of the London & North Eastern Railway Company with reference to the proposed railway arrangements for the Melrose Show. From this letter it appeared that it was proposed that passengers should use Melrose Station, and also certain exhibits, including Implements and Machinery, while live stock would be handled at St Boswells Station, which was about three miles from the site of the Show. After discussion, the Committee had decided to recommend that a deputation, consisting of Major R. W. Sharpe, Mr Thomas Templeton, Captain Thomas Elliot, Mr Robert Macmillan, and Professor Stanfield, be appointed to meet the Railway Company officials with a view to discussing the matter.

#### *Show of 1937.*

A Report of the Sites Committee, appointed on 6th February, was submitted. The Report was as follows:—

The Committee visited and inspected sites at Bridge of Allan, Alloa, and Stirling, on Monday and Tuesday, the 22nd and 23rd April.

*Bridge of Allan.*—At Bridge of Allan, the site proposed consisted of a field of 15 acres, running alongside Station Road, and belonging to Mr William Stirling of Keir, and two or three fields belonging to Messrs Robert Pullar & Sons, Ltd., Keirfield, extending to 25 acres. These fields all lay to the east of the railway, but the 15-acre field was divided from the others by the Inverallan Road. The fields were in grass with a good turf, and the subsoil was sand and gravel. Further ground, it was stated, would be available on the west side of the railway on the Keir Estate for parking purposes. Water and gas were available in proximity to the ground. The main objection to this site was the fact that it was divided into two parts by a public highway, which, however, might be closed for the days of the Show, and that the railway facilities at Bridge of Allan Station were not adequate to deal with the Show traffic.

*Alloa.*—The site at Alloa was Alloa Park, the property of the Earl of Mar and Kellie, on which the Show was held in the year 1929. This site extended to over 60 acres, was level, and, while it was carse land, was covered with very old turf. There were several accesses to the ground by means of the carriage drives within the Alloa Park Policies, and there was a separate entrance for Stock and Implements. There was sufficient ground for the parking of cars near the entrance, and the railway facilities were adequate.

In extending a cordial invitation to the Society to visit Alloa in 1937, the Town Council stated that a free and ample supply of water would be led into the Show-ground free of charge; that the main gas supply pipe and branch service pipes for each Exhibitor or Caterer would be introduced, meters fixed, and cooking and heating apparatus supplied, the only charge to be for gas consumed at the usual meter rates according to the scale in force within the Burgh. The town of Alloa would also undertake the restoration of the roads at Alloa Park, so far as these

might be damaged in course of occupation by the Society, and, if it should be necessary, would arrange for an extension of the existing roads, all without charge to the Society.

The only obligation resting upon the Society would be to restore the Show-ground and the motor field in the usual manner, and to pay the grazing rent.

*Stirling.*—The Committee met the Provost and a Committee of the Town Council, and, with them, visited and inspected the site at the King's Park. Since that date visits had been paid to the ground by the Society's Consulting Engineer. As it was evident that the ground used for the Show in 1921, which extended only to 27½ acres, would not suffice for 1937, the Provost's Committee stated that they were prepared to undertake levelling operations on the lower part of the King's Park to the north-west of the former site, so as to allow the Showyard to extend in that direction. A Plan showing the extent of these operations was submitted.

The Burgh Surveyor, and had been examined, on the ground, by the Society's Consulting Engineer.

Professor Stanfield reported to the Committee that he had examined the site along with the Burgh Surveyor. No definite details were available as to what levelling would be carried out, and he was of opinion that even if levelling was carried out, which appeared to him to be impracticable, the area available would not be sufficient in extent to accommodate the Show in a satisfactory manner.

After careful consideration, and in view of all the circumstances, the Committee decided to recommend that the invitation of the Town Council of Alloa be accepted, and that the Show be held in Alloa Park, so kindly placed at the disposal of the Town Council and the Society by the Earl of Mar and Kellie.

On the motion of the Chairman, the Report of the Sites Committee was unanimously adopted.

#### *Macaulay Institute for Soil Research.*

On the motion of the Earl of Home, K.T., Treasurer, it was unanimously agreed to confirm the proposed grant of £500 to the Macaulay Institute for Soil Research.

#### *Animal Diseases Research Association.*

On the motion of the Earl of Home, K.T., it was unanimously agreed to confirm the proposed grant of £200 for the current year to the Animal Diseases Research Association.

#### *Glasgow Veterinary College.*

On the motion of the Earl of Home, K.T., it was unanimously agreed to confirm the proposed grant of £100 for the current year to the Glasgow Veterinary College.

#### *Eradication of Bracken.*

A letter was read from Mr Ian M. Campbell, Bal Blair, Invershin, who was unable to be present, in which he stated that the Secretary of State for Scotland had for the first time, at the recent Meeting in Edinburgh, admitted that they had a genuine grievance and a case that was worthy of the Government's consideration and help. No provision had been made in this year's estimates to meet expenditure on the Eradication of Bracken, but the Secretary of State had informed them that every consideration would be given to it next year.

Mr Campbell suggested that further consideration of this matter be deferred until, say, the December Meeting, and, after some discussion, this was agreed to.

#### *Importation of Corriedale Sheep.*

A letter was read from the Ministry of Agriculture and Fisheries, forwarding copy of an Order made by the Minister, on 13th May, authorising the importation of one Corriedale Ram and six Corriedale Ewes from New Zealand, consigned to Mr Robert Thomson of Castle Douglas.

*Eradication of Bovine Tuberculosis.*

A letter was read from Mr William Lohoar, Wester Balrymonth, St Andrews, forwarding copy of a Scheme for the Eradication of Tuberculosis in what are at present non-rearing herds.

It was decided that the Scheme be remitted to the Science Committee for consideration and report.

*Committee on Cattle Diseases.*

A letter was submitted from the Scottish Branch of the National Veterinary Medical Association, forwarding copy of a Scheme which had been drawn up by the Association with a view to facilitating the best utilisation of the services of the Veterinary profession in carrying out the work outlined in the Report of the Committee on Cattle Diseases (Economic Advisory Council).

It was decided that the Scheme be remitted to the Science Committee for consideration and report.

*Finance.*

A Minute of Meeting of Committee, dated 5th June, was submitted and approved.

The Minute dealt with the following matters:—

*Contagious Bovine Abortion.*—A letter had been received from the Secretary of the Scottish Committee on Contagious Bovine Abortion, applying for the second instalment of the grant of £1000 which the Society decided to contribute last year. Along with the letter was a Statement of Income and Expenditure of the Research Fund during the past twelve months. The Committee recommended that the second instalment of £333, 6s. 8d. be paid forthwith.

*Highland Reel and Strathspey Society.*—The Committee recommended that the grant of £50 to the Highland Reel and Strathspey Society be renewed for the current year.

*Caledonian Society of France.*—A letter had been submitted from Sir Ian Malcolm of Poltalloch, President of the Caledonian Society of France, making application for a small grant towards the funds of that Society. The Committee recommended that a donation of £1, 1s. be given.

*Offer of Picture.*—A letter had been submitted from the Dowager Lady Aberdeen, offering the Society a picture, by Mr Gourlay Steell, R.S.A., of a group of Aberdeen-Angus Cattle, which belonged to her father, the late Lord Tweedmouth. The Committee recommended that the picture be accepted, and that the cordial thanks of the Society be conveyed to the Dowager Lady Aberdeen for the gift.

*Natal Government Stock.*—Intimation had been received from the Crown Agents for the Colonies of the redemption, on 1st August next, of the Society's holding of £2500 3½ per cent Inscribed Stock of the Natal Government. The necessary Form of Authorisation was submitted and signed by three Ordinary Directors and the Treasurer.

*Live Stock Industry.*

The Secretary reported that he had received, on 3rd May, a communication from the Central and Associated Chambers of Agriculture, London, inviting the Society to appoint a representative to attend a Meeting to be held in London on 17th May. The subject of discussion was the proposals of the Government for assisting Home Meat Producers by means of a levy on imported meats. It was stated that all the leading agricultural organisations, including the Council of Agriculture for England, the Agricultural Committee of the House of Commons, and the Royal Agricultural Society, had been invited to send representatives. As the matter was important and urgent, he had communicated with the Chairman of Directors, and, with his authority, had asked Mr J. P. Ross-Taylor to represent the Society at the proposed Meeting.

Mr J. P. Ross-Taylor reported on the proceedings at the Meeting, and referred to a series of six Resolutions which were arrived at at the Meeting. One of these was to the effect that a continuing Advisory Committee of the Conference be set up to deal with questions arising out of the present situation, and that each Organisation represented at the Conference appoint at least one representative to the Committee.

It was unanimously decided that Mr Ross-Taylor be nominated as the Society's representative on the proposed Advisory Committee.

MEETING OF DIRECTORS HELD IN THE SHOWYARD,  
ABERDEEN, 19TH JUNE 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Mr Ian M. Campbell; Mr Alexander Clark; Mr John E. B. Cowper; Mr James Durno; Captain Thomas Elliot; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr James M'Laren; Mr Alexander Munro; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Major S. Strang Steel; Captain John C. Stewart; Mr Thomas Templeton; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wyllie. *Extraordinary Directors*—Mr George Argo; Mr James P. Brown; Mr George A. Bruce; Mr James Cruickshank; Mr J. E. Kerr; Mr James Kilpatrick; Mr Robert Macmillan; Mr John Reith; Mr J. P. Ross-Taylor; Mr T. Mercer Sharp; Major R. W. Sharpe; Mr John P. Sleight; Mr A. A. Hagart Speirs; Mr Andrew Spence. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c. *Assistant Consulting Engineer*—John B. Todd, B.Sc., Ph.D., &c. *Auditor*—George James Gregor, C.A.

*Letters.*

Letters were read from The Earl of Home, K.T., Treasurer, expressing regret at his unavoidable absence from the Show, and from Colonel F. J. Carruthers of Dormont, Honorary Secretary, expressing regret at being unable to be present on account of illness.

*Protests.*

The Secretary reported that one protest had been received, this being from Mr Samuel Barr, Nottylees, Kelso. It related to the disqualification, by the Judge, of his Suffolk Shearling Ram, on the ground that the wool had been artificially coloured.

It was agreed that the protest be remitted to the following Special Committee for consideration and report: Mr Robert Macmillan; Mr James M'Laren; Mr J. P. Ross-Taylor; Mr Alexander Clark; and Captain Thomas Elliot.

At a later hour on the same day the Committee duly reported, their report being in the form of a Minute, in the following terms.

The Minute stated that the Special Committee, after considering the protest and interviewing Mr Samuel Barr, Mr J. H. Brigg, the Judge, and the Steward of Sheep, had unanimously decided to recommend that the decision of the Judge be upheld, and the protest be not sustained.

The recommendation of the Special Committee was unanimously adopted.

It was further decided that Mr Barr's deposit of £2, 2s., lodged with the protest, be returned to him.

*Precepts.*

The Chairman was authorised to sign the Precepts for the prizes awarded at the Aberdeen Show.

Authority was given to draw upon the Society's Ordinary Funds to meet any deficit on the Show Account, and also, if necessary, to obtain an Overdraft from the Bank of a sum not exceeding £2000.

MEETING OF DIRECTORS, 6TH NOVEMBER 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr James P. Brown; Mr George Buchanan; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr Alexander Murdoch; Dr T. G. Nasmyth;

Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer

*Directors*—Mr J. Hastie Brydon; Mr John E. B. Cowper; Mr Andrew D. Elliot; Mr Thomas Elliot; Mr Hugh W. Fleming; Mr John Hewatson; Mr J. E. Kerr; Mr James Kilpatrick; Mr James McLaren; Mr Robert Macmillan; Mr James Mitchell; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Mr T. W. Robson Scott; Mr James B. Stewart. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—J. F. Tocher, D.Sc., F.I.C. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c. *Assistant Consulting Engineer*—John B. Todd, B.Sc., Ph.D., &c. *Consulting Entomologist*—A. E. Cameron, M.A., D.Sc.

*The late Duke of Buccleuch and Queensberry, K.T., G.C.V.O.*

Before proceeding with the business of the Meeting, the Chairman referred, with the deepest regret, to the death of His Grace The Duke of Buccleuch and Queensberry, K.T., G.C.V.O.

The late Duke, he said, was long connected with the Society, having been a Member for nearly half a century. He filled the office of Vice-President on five separate occasions, while, in the years 1914 and 1930, he occupied the office of President of the Society.

As the owner of extensive estates, the Duke was keenly interested in Agriculture and in Forestry. He was an ideal landlord, and took a deep interest in research and in improved systems and methods calculated to increase the productivity of the land. His wide knowledge of Agriculture was placed freely at the disposal of many public bodies, in all of which he occupied honoured positions, and was held in the highest esteem.

In the world of business, politics, and local administration he rendered equally valuable and devoted service, and, in his passing, the Nation had lost one of its most distinguished sons. The Society was honoured by his occupancy of the office of President, and his death was a loss to the Society which they deeply deplored.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the Dowager Duchess of Buccleuch and Queensberry and the family of the deceased.

*The late Mr John M. Aitken.*

The Chairman also referred, with deep regret, to the death of Mr John M. Aitken, The Hill, Lockerbie. Mr Aitken, he said, had a long connection with the Society, having been a Member for fifty-six years, and a Director for various terms, embracing a period in all of about fifteen years.

For over forty years Mr Aitken was prominently identified with the public life of Dumfriesshire, and was highly esteemed and respected, not only there, but throughout a much wider area. He gave ungrudgingly of his time and abilities in administrative affairs, and he served with distinction on many public bodies. His services to the Government in connection with the Munition Factory at Gretna might be mentioned as one incident in a life of devoted and useful activity. In his death, the Society had lost a valued supporter, whose place would not readily be filled.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Mrs Aitken and the family of the deceased.

*The late Mr A. H. Anderson.*

The Chairman said the Society had also suffered a loss through the death of Mr A. H. Anderson, The Firs, Dunblane, and late of Kippendavie Estate Office. Mr Anderson's connection with the Society, he said, dated back to 1883, when he first became a Member, so that his membership extended over a period of more than fifty years. He served as an Ordinary Director continuously from 1902 to 1913, and as an Extraordinary Director in the years 1914, 1915, and 1921. He took a keen interest in the affairs of the Society, and especially in the Annual Shows, having filled the office of Steward of Cattle from 1911 to 1914 inclusive.

Mr Anderson took a prominent part in the public life of Perthshire, and devoted much of his time and energies to the furthering of Agricultural and Educational interests in that county. His sound judgment and practical knowledge of Agriculture were of value in the discharge of these public duties, and earned for him the respect and regard of all with whom he was associated.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Mr. Anderson and the family of the deceased.

*The late Bailie William Poole, J.P.*

The Chairman said the Society had also suffered a further loss by the death, since last Meeting, of Bailie William Poole, J.P., Englewood, Blackhall. Bailie Poole, he said, had been a Member of the Society for forty years, and had served as a Director, representing the Implement trade, for several periods of office. He showed a very deep interest in the affairs of the Society, and especially in everything connected with Farm Implements and Machinery. He took a leading part in the introduction of the Self-Binder to this country, and at the Society's various Trials of Implements and Machines his was an outstanding figure. Although fully occupied with business activities, he yet found time to serve with acceptance on the Town Council of Edinburgh and other public bodies, in all of which he won the respect of his colleagues, and was esteemed for his cheerful disposition and sincerity of character. His death was a loss to Agriculture and to the Society which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*Chairman of the Board for 1935-36.*

On the motion of Mr Alexander Murdoch, East Hallside, Cambuslang, seconded by Colonel F. J. Carruthers of Dormont, Lockerbie, Mr Robert Macmillan of Holm of Dalquharn, Woodlea, Montaiave, was unanimously re-elected Chairman of the Board for the ensuing year.

Mr Robert Macmillan, in accepting office, thanked the Directors for the honour they had again conferred upon him, and for the support which they had given him during the year in which he had held office.

*T.R.H. The Duke and Duchess of Gloucester.*

The Chairman said that, at a Meeting of the Finance Committee held that morning, it had been decided to send a telegram of congratulation to The Duke and Duchess of Gloucester on the occasion of their wedding, which took place that day. The telegram was in the following terms:—

“THE DUKE AND DUCHESS OF GLOUCESTER,  
BUCKINGHAM PALACE, LONDON.

The Directors of the Highland and Agricultural Society of Scotland respectfully tender their heartiest congratulations and best wishes.

ROBERT MACMILLAN, *Chairman.*  
JOHN STIRTON, *Secretary.*”

The Directors unanimously homologated the action of the Committee.

*Aberdeen Show, 1935.*

*Accounts.*—The Treasurer reported that a Summary of the Accounts of the Aberdeen Show had that day been submitted to the Finance Committee. These Accounts showed a probable credit balance of about £526.

*List of Awards.*—A List of Awards at Aberdeen Show was laid on the table.

*Misuse of Member's Badge.*—At the Meeting of Finance Committee the Secretary had reported that, at the recent Aberdeen Show, a person who was not a Member of the Society had fraudulently used his father's badge with the intention of obtaining free admission to the Showyard. The Finance Committee, after very

careful consideration, agreed to recommend that the person concerned be written to, pointing out the seriousness of the offence and the fact that he was liable to prosecution.

The Committee also agreed to recommend that, in the event of any such case arising in future, it should be at once reported to the Directors with a view to prompt action being taken. The recommendations of the Finance Committee were approved.

#### *Melrose Show, 1936.*

*Judges.*—The following were appointed a Selection Committee to draw up Panels of Judges for consideration at next Meeting: Mr J. E. B. Cowper, Mr James Durno, Mr W. P. Gilmour, Mr George Grant, Mr J. E. Kerr, Mr James Kilpatrick, Mr James M'Laren, Mr Alexander Munro, Mr Alexander Murdoch, Mr J. P. Ross-Taylor, Mr T. Mercer Sharp, Mr Thomas Templeton, with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

*Forage Committee.*—The following Committee was appointed to make arrangements for the supply of forage, and report to the Board: Mr John W. Prentice (*Convener*), Mr George Buchanan, Mr Thomas Clark, Mr J. E. B. Cowper, Captain Thomas Elliot, Mr James M'Laren, Mr William Meiklem, Mr Alexander Munro, Mr James Paton, Mr T. Mercer Sharp, Major R. W. Sharpe, Mr James B. Stewart, and Mr P. O. Turnbull.

*Show Contracts.*—It was remitted to the following Special Committee, with powers, to arrange for timber and other contracts in connection with the Show-yard: Major R. W. Sharpe (*Convener*), Mr James Durno, Mr George Grant, Mr James Kilpatrick, Mr James R. Lumsden, Mr James M'Laren, Mr R. Macmillan, Mr Alexander Munro, Mr Alexander Murdoch, Mr Gavin Ralston, Mr John P. Sleigh, Major S. Strang Steel, and Professor Stanfield.

*Hotel Accommodation and Catering in Showyard.*—It was remitted to the Chairman of the Board, the Chairman of the Shows Committee, the Convener of the Local Committee, the Steward of Catering, and the Secretary, to make the necessary arrangements.

With regard to accommodation, it was reported that a sufficient number of rooms had been booked at the Waverley Hydro, Melrose, and at the Abbey and George and Abbotsford Hotels, Melrose, for Directors and Judges.

*Forestry Exhibition.*—It was agreed that space be granted to the Royal Scottish Forestry Society for an Exhibition of Timber, and also a grant of £40 towards the expenses of the Exhibition.

*Special Prizes.*—A large number of Special Prizes were accepted, and votes of thanks accorded to the donors.

#### *Special Grants for Centenary Agricultural Shows.*

Mr John Hewetson, Baltersan, Newton-Stewart, submitted the following motion, the terms of which appeared under his name on the Agenda:—

“That the Society give Special Grants of £15 each to Local Agricultural Societies attaining the Centenary of their foundation, this sum to be awarded as a Special Prize or Prizes at their Centenary Show.”

In speaking to the motion, Mr Hewetson said that if it were passed he thought it would prove a great encouragement to any Local Agricultural Society which had been in existence for one hundred years.

The motion was seconded by Dr T. G. Nasmyth, Canaan Lodge, 43 Canaan Lane, Edinburgh.

Mr Alexander Murdoch moved, as an amendment, that the motion be not agreed to. He pointed out that the Society gave grants annually to Local Agricultural Societies, amounting to between £800 and £1000, and thought that to accept a motion in the terms submitted by Mr Hewetson would create a very awkward precedent. He considered that any Local Agricultural Society which was holding its Centenary Show should apply to the Society for a Special Grant, so that each application could be considered upon its merits.

Colonel F. J. Carruthers of Dormont, Lockerbie, in seconding the amendment, said he thought it would be a very great mistake to tie the Directors' hands in the way proposed by the motion. Applications for such grants would, he felt sure, receive sympathetic consideration by the Directors.

On a vote being taken, the amendment was carried by a large majority.

*Ayrshire Agricultural Association.*

A letter, dated 5th June, was submitted from the Ayrshire Agricultural Association, making application for a special donation towards the funds of its Centenary Show to be held in 1938.

It was agreed that the application be remitted to the Finance Committee for consideration and report.

*Sale of Diseased Potatoes.*

It was reported that, on 18th July, a letter was received from the Department of Agriculture for Scotland, requesting the Society to appoint representatives to attend a Meeting at the Offices of the Department on Wednesday, 31st July, with regard to a proposal by the Department to issue an Order making it an offence to sell for planting purposes any potatoes which were substantially affected by any insect or pest.

After consultation with the Chairman of Directors, it was agreed to ask Mr John E. B. Cowper, Gogar House, Corstorphine, and Mr James Paton, Kirkness, Glencraig, to represent the Society at the Meeting.

Mr Cowper had forwarded a Report on the Proceedings at the Meeting, in which he stated that, in view of the fact that complaints regarding the sale of seed potatoes affected by insects or pests were not well founded, it was considered that the Order proposed by the Department of Agriculture was unnecessary at the present time. It was agreed to leave the question over for another year, and, in the meantime, to give as much publicity as possible to the matter, as a deterrent to those persons who had been responsible for the complaints.

On the motion of the Chairman, Mr Cowper and Mr Paton were thanked for representing the Society at the Meeting.

*Fourth International Grassland Congress.*

Letters were submitted from the Vice-President and the Joint Secretary of the Fourth International Grassland Congress to be held in England in July 1937, under the Presidency of Professor R. G. Stapledon, Director of the Welsh Plant-Breeding Station, Aberystwyth. It had been decided that each Association or body representing different interests in British Agriculture should be asked to nominate one of its members to act on the Main Organising Committee of the Congress, and accordingly the Society was asked to nominate one representative to act on this Committee.

It was agreed to appoint Mr James Wither, Awhirk, Stranraer, as the representative of the Society on the Committee.

*Central Council, S.W.R.I.*

A letter, dated 3rd July, was submitted from the Central Council, S.W.R.I., requesting the Society to receive a deputation from the Central Council to discuss arrangements for Institute exhibits at future Shows of the Society.

It was agreed to receive the deputation on Monday, 25th November, at 2 P.M., and the following Committee was appointed to meet the members of the deputation: Major R. F. Brebner, Colonel F. J. Carruthers, The Earl of Home, K.T., Mr Robert Macmillan, Dr T. G. Nasmyth, Mr Charles W. Ralston, and Major R. W. Sharpe.

*Proposed Live Stock and Meat Industry Advisory Council.*

Mr J. P. Ross-Taylor, Mungoswalls, Duns, reported on the proceedings at a Meeting of the Committee appointed to consider as to the advisability of setting up a Live Stock and Meat Industry Advisory Council. He stated that the Committee had met twice since 18th July, but he had attended only the second Meeting, held on 31st October. The main objects of the proposed Advisory Council, he said, were to provide a Central Organisation to represent unitedly all sections of the Live Stock and Meat Industry of Great Britain and Northern Ireland, to promote, watch over, and generally do all such things from time to time desirable in the economic interests of the community, and particularly to assist His Majesty's Government in the formulation of measures to that end. It was further proposed that the Annual Subscription for organisations in England should be One Hundred



Guineas, and for organisations in Scotland and Northern Ireland, Fifty Guineas, to date from the constitution of the Council.

Mr Ross-Taylor said that the position at the present time was very much in the air, and the majority of the representatives at the Meeting were of the opinion that if the organisations representing the farmers did not join, it would be useless to proceed with the formation of the suggested Live Stock and Meat Industry Advisory Council. He suggested that the Directors authorise him to attend a further Meeting called for 28th November, so that he could report at the Directors' Meeting in December what definite decisions had been arrived at. He thought it desirable that he should attend this further Meeting, in view of the fact that the producers' interests were not sufficiently represented on the Committee.

The Directors agreed that Mr Ross-Taylor represent the Society at the Meeting, and, at Mr Ross-Taylor's request, it was agreed that he be authorised to say quite definitely that the Society did not agree to the setting up of a separate body on the lines proposed.

The Chairman said that the Directors had to thank Mr Ross-Taylor for acting as the Society's representative at the Meetings of the Committee, and for the excellent Reports he had submitted regarding the proceedings.

#### *Finance.*

A Minute of Meeting of Committee, dated 6th November, was submitted and approved.

The Minute dealt, *inter alia*, with the following matters:—

*Natal Government Stock.*—It was reported that the sum of £2500 had been received, being repayment of 3½ per cent Inscribed Stock of the Natal Government, and that this sum had been placed on Temporary Loan with the Corporation of Edinburgh.

It was agreed to defer the question of reinvestment until the Meeting of the Committee in January.

*Picture presented by the Dowager Lady Aberdeen.*—The Secretary reported that the picture kindly presented by the Dowager Lady Aberdeen had been received.

It was agreed that a letter of thanks be sent to the Dowager Lady Aberdeen for her generosity in presenting the picture to the Society.

With regard to the hanging of this and other pictures in the possession of the Society, it was agreed that this matter be left in the hands of the following Sub-Committee: Colonel F. J. Carruthers, Mr Alexander Murdoch, and Dr T. G. Nasmyth.

#### MEETING OF DIRECTORS, 4TH DECEMBER 1935.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlee, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr James P. Brown; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumadon; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Gavin Ralston; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleigh; Mr Phipps O. Turnbull; Colonel Robert W. Walker; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr J. Hastie Brydon; Mr Ian M. Campbell; Mr John E. B. Cowper; Mr Andrew D. Elliot; Mr Thomas Elliot; Mr Alexander Forbes; Mr J. E. Kerr; Mr James Kilpatrick; Mr James M'Laron; Mr Robert Macmillan; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Mr T. W. Robson Scott. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c.

#### *The late Mr William Mungall.*

Before proceeding with the business of the Meeting the Chairman referred, with deep regret, to the death of Mr William Mungall of Transy, Dunfermline. Mr Mungall, he said, had been a Member of the Society for over thirty years, and had been an Ordinary Director from 1916 to 1919 and an Extraordinary Director during 1912, the year of the Cupar Show.

He would best be remembered in agricultural circles for his keen interest in the breeding of Shetland Ponies, of which he possessed a notable stud, and he was a consistent and successful exhibitor of these ponies at the Society's Annual Shows.

He was well known and esteemed in the Dunfermline district of the County of Fife, where, in addition to his extensive business connections, he occupied various prominent positions in public affairs.

In view of his interest in the affairs of the Society and his constant attendance at the Annual Shows, his death was a loss to the Society which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the daughter of the deceased.

#### *Illness of Secretary.*

The Chairman also referred to the illness of Mr John Stirton, Secretary of the Society. He said he felt sure that every Director present would sympathise with Mr Stirton in his illness. He also brought to the notice of the Directors that Mr Stirton's absence at the November Meeting was the first since his appointment in 1912—a period of twenty-three years—which, he said, was a notable achievement.

On the motion of the Chairman it was agreed that a letter be sent to Mr Stirton expressing, on behalf of the Directors, their great regret on hearing of his protracted illness, and their sincere hope that he would be speedily restored to his usual good health.

#### *T.R.H. The Duke and Duchess of Gloucester.*

It was reported that, in reply to the telegram of congratulation to T.R.H. The Duke and Duchess of Gloucester on the occasion of their wedding, the following telegram had been received from Their Royal Highnesses:—

“BUCKINGHAM PALACE.

MACMILLAN, Chairman,

Highland Agricultural Society, Edinburgh.

The Duke and Duchess of Gloucester thank the Directors of the Highland Agricultural Society for their good wishes.”

#### *Letters.*

The following letters were submitted:—

*Dowager Duchess of Buccleuch.*—Expressing thanks for resolution of regret and sympathy on the death of her husband, the late Duke of Buccleuch and Queensberry, K.T., G.C.V.O.

*Miss Margaret I. Poole, Edinburgh.*—Thanking the Directors for resolution of sympathy on the death of her father, the late Bailie William Poole, Englewood, Blackhall.

*Mrs Anderson.*—Acknowledging resolution of sympathy on the death of her husband, the late Mr A. H. Anderson, The Firs, Dunblane.

#### *Melrose Show, 1936.*

A Report of the Shows Committee, dated 5th November, which had been printed and circulated, was submitted, considered in detail, and approved.

A Minute of Meeting of Shows Committee, dated 4th December, was also submitted.

The Minute dealt with the following matters:—

*Secretary's Notes on Royal Show, &c.*—A Report of a Sub-Committee appointed at last Meeting was considered and approved.

The Report dealt, *inter alia*, with the following matters:—

*Parade Ring.*—That the Parade Ring be on similar lines to that of the Royal Show—i.e., the Grand Stand be supplemented by additional covered stands, partly extending along each end of the Ring, and that the side opposite the Grand Stand be left open—this side to look on to the Main Square. That (a) two lines of seats be built along the open side, the outer one being slightly higher than the inner one; (b) a substantial railing be erected surrounding the whole Enclosure; and (c) canvas walling be used in place of timber at the back of the Grand Stand.

from the top seat to the ground, and again in front of the Grand Stand, from the protecting rail to the ground.

*Press.*—That the Press Luncheon on the Monday be discontinued, and a small room be erected adjoining the Press Room, where Pressmen would be served, free of charge, with sandwiches, cakes, and refreshments.

*Pig Pens and Judging Rings.*—That these pens be constructed on similar lines to those at the Royal Show, with rails  $1\frac{1}{4}$  inches thick, and that the Pig Judging Rings be provided with small movable hurdles, 7 ft. by 3 ft., to be fixed so as to project at right angles to the side of the ring, and so provide convenient corners for holding a pig.

*Hot Water Boilers.*—That three boilers be provided, one near the Cattle Section, one near the Horse Section, and the other near the Sheep and Pig Sections, and that a man be placed in charge to keep the boilers filled and boiling.

*Cattle Stalls.*—It was agreed to recommend that the width of the stalls be 5 ft., and that the divisions between animals be 4 ft. in length. In the case of Aged Bulls, and Cows with Calf at Foot, the width to be extended to 10 ft.

*Horse Boxes.*—It was agreed that the horse boxes for Clydesdale Horses and Hunters be 10 ft. by 10 ft., with an additional 2 ft. in depth for Clydesdale Aged Stallions and three-year-old Colts, Aged and three-year-old Clydesdale Geldings, and Clydesdale and Hunter Brood Mares.

*Sheep, Goat, and Pig Pens.*—It was also recommended that these pens be 5 ft. in width, and that the Goat pens be of the same construction as the pens for Sheep.

*Unloading Yard.*—That an unloading yard be placed adjacent to the Stock Gate, in which all vehicles containing Cattle and Horses should be unloaded, and animals led to their respective stalls and boxes, and that, if possible, a sleeper track be laid to within easy reach of the Sheep and Pig pens.

*Hunters and Riding Ponies.*—On a report of a Sub-Committee, it was agreed to recommend that the Classes for Hunters be the same as those provided at Kelso Show in 1926, except that the Special Prizes for Foals be confined to foals entered with Mares in the Brood Mare Class; and that three Classes be provided for Riding Ponies, two of these to be confined to ponies ridden by children up to fourteen years of age.

*Highland and Western Island Ponies.*—It was agreed to delete the Class for Geldings.

*Suffolk Sheep.*—On a representation from the Breed Society, it was agreed to provide two extra Classes, one for Untrimmed Ram Lamb, and the other for Untrimmed Ewe Lamb, with prize-money £5, £3, and £2 in each Class.

It was also agreed that a fourth prize of £1 be offered in the Classes for Tup, Shearling Ewe, and Tup Lamb. The extra prize-money involved was £23, and this the Breed Society had agreed to contribute.

*Shepherds' Pack Sheep.*—It was agreed that Classes be provided for Shepherds' Pack Sheep for each of the following breeds: Blackface, Cheviot, and Half-Bred—the classification to be the same as at Kelso in 1926—viz., Ewe above one shear, with her Lamb at Foot; Shearling Ewe or Gimmer; and Ewe Lamb. The prize-money in each Class to be £3, £2, and £1, a total of £54, and the entry fee 5s. each entry.

*Bacon Pigs.*—The Committee considered a Report of the proceedings at a Meeting of the Bacon Pig Committee, in which it was stated that it was desired to have a separate Competition for Live Pigs at the Show, and another for Stages II. and III. at the Bacon Factory, and to divide the prize-money proportionately.

After consideration, however, it was decided to recommend that the Bacon Pig Competition be limited to the Live Pigs at the Show, and that Mr J. H. Birch, of Messrs Roberts & Birch (Burton), Ltd., Burton-on-Trent, be asked to judge. The question of prize-money was left over until the next Meeting of the Committee.

It was also agreed that Exhibitors in this section be limited to two entries each.

*Poultry Classes.*—On a recommendation by the Sub-Committee appointed at last Meeting, it was agreed that the closing date for entries of Poultry be fourteen days later than the closing day for Stock, and that the classification be the same as at Aberdeen.

*Rule 79.*—It was agreed that this Rule be amended so as to provide that all boxes for Attendants in the Cattle Section be erected at the end of each run of shedding.

The Minute of the Shows Committee dated 4th December was then approved.

*Convener of Local Committee.*—On the motion of Mr J. P. Ross-Taylor, Mungos-walls, Duns, it was unanimously agreed that Major S. Strang Stool of Philiphaugh, Selkirk, be appointed Convener of the Local Committee of Management.

*Rural Industries.*—A Report of the Meeting of the Special Committee of Directors with the deputation from the Central Council of the S.W.R.I. on 25th November, was submitted.

The main request of the deputation was that the Society, in addition to providing a free stand, should also bear the cost of the internal fittings, up to a certain figure, to be determined by the Directors.

On the motion of Major R. W. Sharpe of The Park, Earlstoun, it was agreed that, in addition to giving a free stand, the Society should provide the internal fittings for the stand up to a cost not exceeding £30.

*Special Prizes.*—A large number of Special Prizes were accepted, and votes of thanks accorded to the donors.

*The Seeds (Scotland) (Amendment) Regulations, 1935.*

A letter was read from the Department of Agriculture for Scotland, forwarding copy of the Seeds (Scotland) (Amendment) Regulations, 1935. It was pointed out in the letter that the reason for the new Regulations was that the Ministry of Agriculture and Fisheries had decided to introduce two new Classes for Seed Potatoes grown in England and Wales. The definitions of these Classes were: Class I. (English Special Stock)—Potatoes grown in England under the provisions of a scheme authorised by the Minister of Agriculture and Fisheries; and Class II. (Welsh Special Stock)—Potatoes grown in Wales under the provisions of a scheme authorised by the Minister of Agriculture and Fisheries.

*Eradication of Bracken and Land Drainage.*

Mr Ian M. Campbell, Bal Blair, Invershin, submitted the following motion, the terms of which appeared under his name on the Agenda:—

“That, in view of the threat to our National resources in the serious depreciation of both the carrying capacity of Pastoral Land, and the quality of Sheep Stocks thereon, the Society co-operate with the National Farmers' Union, and interested Breed Societies, in requesting the Government to make provision for a grant of not less than one-third of the cost of land drainage, and a similar proportion of the cost of the destruction of bracken, during the year 1936.”

In speaking to the motion, Mr Campbell referred to the serious position in which many sheep-farmers found themselves at the present time. Individual farmers, he said, were unable to meet the cost of cutting bracken and draining of land. In view of the rapid spread of bracken on the hillsides there was a deterioration of grazing, and sheep were becoming badly affected by maggot-fly, so much so that there was a heavy depreciation, both as regards numbers and quality, in all sheep on hill farms. Mr Campbell thought, therefore, that the motion was one worthy of consideration by the Society.

Captain Thomas Elliot, Thirlestane, Lauder, in seconding the motion, stated that farmers who were most troubled with bracken were those who could least afford to spend money in eradicating it. So far as drainage was concerned, he said he was quite sure that those at that Meeting who farmed arable ground would agree with him when he said that he did not think one-fourth of the cost in grants was any inducement to undertake a drainage scheme.

The motion was unanimously adopted, and the following representatives were appointed to co-operate with the National Farmers' Union of Scotland, and other interested Societies, in the matter: Mr Robert Macmillan of Holm of Dalquharrin, Woodlee, Moniaive; Mr Ian M. Campbell, Bal Blair, Invershin; and Captain Thomas Elliot, Thirlestane, Lauder.

*Proposed Live Stock and Meat Industry Advisory Council.*

Mr J. P. Ross-Taylor, Mungoswells, Duns, reported on the proceedings at a further Meeting held in London on 28th November, with regard to the formation of the proposed Live Stock and Meat Industry Advisory Council for Great Britain and Northern Ireland. He said that, in his opinion, no good purpose would be served by the Society continuing to be represented on the proposed Council, and he accordingly moved that the Society be not represented as a constituent body on that Council.

This was agreed to.

In view of this decision, Colonel F. J. Carruthers of Dormont, Lockerbie, moved that the Society convene a Conference, at an early date, to discuss what steps should be taken to safeguard the interests of the live stock industry of the country, especially in regard to Scottish producers.

The motion was unanimously agreed to, and it was decided to request the Scottish Chamber of Agriculture, the National Farmers' Union of Scotland, and the Institute of Auctioneers and Appraisers in Scotland, to appoint representatives to attend such a Conference. The following were appointed to represent the Society at the Conference: Mr Robert Macmillan of Holm of Dalquhairn, Woodlee, Moniaive; Colonel F. J. Carruthers of Dormont, Lockerbie; Mr J. P. Ross-Taylor, Mungoswalls, Duns; Mr James Durno, Criche, Inverurie; and Mr James Paton, Kirkness, Glencraig.

#### Finance.

A Minute of Meeting of Committee, dated 4th December, was submitted and approved.

The Minute dealt, *inter alia*, with the following matters:—

*Scottish Agricultural Organisation Society.*—The Committee recommended that a grant of £100 be again given to the Scottish Agricultural Organisation Society for the year 1936.

*Ayrshire Agricultural Association.*—It was also recommended that a donation of £25 be given towards the funds of that Association's Centenary Show to be held next year.

*Stranraer and Rhins of Galloway Agricultural Society.*—It was further agreed to recommend that a sum of £15 be given towards the funds of the Centenary Show of that Society to be held next year.

*Show Accounts, &c.*—A Minute of Meeting of Finance Sub-Committee, dated 2nd December, was submitted and approved.

The Minute contained the following recommendations:—

*Hire of Timber.*—That 50 per cent be added to the quantities of timber which at present appeared on the Schedule forwarded to firms tendering for hire of timber, and that the Engineers go carefully through the various sizes of wood required for the erection of the Show, and have these properly tabulated in the Schedule.

*Plumbing Account.*—That Tenders be invited for the Plumbing work in the Showyard, and that the Engineers draw up a Schedule showing the amount of piping necessary, the various sizes of piping used, and other material required at the Show. The firms tendering should be permitted to quote either for lead piping or galvanised iron piping.

*Engineers.*—The Sub-Committee made certain recommendations with regard to the duties to be discharged by the Engineer in connection with the Annual Show. As these duties were of such a nature as to require the presence of the Engineer on the Showground throughout the whole period of erection and dismantling of the Show buildings, it was realised that they could not be discharged by the Society's present Engineers.

In view of the Sub-Committee's recommendations, it was agreed to recommend that steps be taken to obtain the services of a full-time man, such as a Clerk of Works, to commence duties not later than May next. In the meantime the services of the Engineers should be retained for another year.

It was further recommended that the Secretary be instructed to draw up a suitable advertisement and submit same to the next Meeting of the Committee.

#### MEETING OF DIRECTORS, 8TH JANUARY 1936.

MR ROBERT MACMILLAN of Holm of Dalquhairn, Woodlee, Moniaive, in the Chair.

*Present.*—*President*—The Duke of Buccleuch and Queensberry, G.C.V.O. *Vice-President*—Captain R. J. Thomson of Kaimos. *Ordinary Directors*—Mr George Buchanan; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleigh; Mr Thomas Templeton; Mr Phupps O. Turnbull; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wither. *Extraordinary Directors*—Mr John E. B. Cowper; Mr Andrew D. Elliot; Mr Hugh H. Fleming; Mr J. E. Kerr; Mr James Kilpatrick; Mr James M'Laren; Mr Robert Macmillan; Mr James Mitchell;

Mr R. A. Robertson; Mr J. P. Ross-Taylor; Major S. Strang Steel; Mr James B. Stewart. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c. *Assistant Consulting Engineer*—John B. Todd, B.Sc., Ph.D., &c.

*The late Sir Hector Munro, Bt., C.B., of Foulis.*

Before proceeding with the business of the Meeting, the Chairman referred, with deep regret, to the death of Sir Hector Munro, Bt., C.B., of Foulis. Sir Hector Munro, he said, was a well-known Landed Proprietor in the North of Scotland, and had been a Member of the Society for over fifty years. He occupied the office of Vice-President on four occasions—viz., 1901, 1911, 1923, and 1932, these being the years of the last four Shows held at Inverness.

As Lord-Lieutenant of Ross and Cromarty, and as Chief of the Clan Munro, he was an outstanding figure in the public life of the North of Scotland, and rendered valuable and distinguished services in many spheres of public activity.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Lady Munro and the family of the deceased.

*The late Mr James H. Steele.*

The Chairman also referred, with deep regret, to the death of Mr James H. Steele, Edinburgh. Mr Steele, he said, was elected a Director of the Society at the Half-yearly General Meeting in June last, as a representative of the Implement Trade, but, unfortunately, was precluded by the state of his health from attending any Meetings of the Board. He was one of the best-known Agricultural Implement Agents in the country, and his firm's exhibit of "Everything for the Farm" was a familiar feature of the Society's Annual Show. Of a genial and kindly disposition, and possessed of a sound practical knowledge of Agriculture, his death was a loss to the Society and to Agriculture generally which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Mrs Steele and the family of the deceased.

*The late Mr D. A. Stewart.*

The Chairman said the Society had also suffered a loss through the death of Mr D. A. Stewart of Lochdhu, Nairn. Mr Stewart, he said, had been a Member of the Society for over fifty years, and served as a Director from 1914 to 1918. He was a noted Breeder of Highland Cattle, and a successful Exhibitor of these at the Society's Annual Show. He was a prominent figure in the public life of the County of Nairn, having occupied leading positions on many public bodies. His death was a loss to the Society and to the County of Nairn which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*The late Mr Alexander Macduff of Bonhard.*

The Chairman finally referred to the death of Mr Alexander Macduff of Bonhard, Perth, who was elected a Member of the Society in 1874, and who served as an Ordinary Director from 1888 to 1893, and as an Extraordinary Director on several occasions, the last of which was during the year 1904. He took an active part in local administrative affairs, and filled many public offices in the County of Perth, where he was held in high esteem.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the relatives of the deceased.

*Secretary.*

The Chairman said that he was sure that they would all wish that he should extend a hearty welcome to Mr Stirton on his return to duty.

Mr Stirton, in acknowledging, said he wished to thank the Directors most sincerely for the kind resolution, with regard to his illness, which appeared in the Minute of their last Meeting. He also desired to acknowledge the efficient manner in which Mr Yardley had discharged the duties of Secretary during his absence.

#### Letters.

The following letters were submitted :—

*Mrs Aitken.*—Expressing thanks for resolution of regret and sympathy on the death of her husband, the late Mr John M. Aitken, The Hill, Lockersbie.

*Mrs E. M. Dick.*—Thanking the Directors for resolution of regret and sympathy on the death of her father, the late Mr William Mungall of Transy.

*Scottish Agricultural Organisation Society.*—Thanking the Directors for renewal of grant of £100 for the current year.

*Ayrshire Agricultural Association.*—Expressing thanks for Special Grant of £25 towards the funds of their Centenary Show.

*Major S. Strang Steel.*—Accepting the Directors' invitation to act as Convener of the Local Committee of Superintendence for Melrose Show.

#### Melrose Show, 1936.

*Stewards.*—The Principal Stewards of the various departments were appointed as follows : *Cattle*—Mr James Durno ; *Horses*—Mr George Grant ; *Sheep, Goats, and Pigs*—Mr James M'Laren ; *Poultry*—Mr James R. Lumsden ; *Catering, Bees, and Honey*—Mr John E. B. Cowper ; *Special Events*—Mr Alexander Murdoch ; *Grand Stands*—Major R. W. Sharpe ; *Forage*—Mr John W. Prentice ; *Gates*—Mr Ian M. Campbell ; *Implements*—Mr J. P. Ross-Taylor ; *Flower Show*—Mr A. A. Hagart Speira.

*Veterinary Inspector.*—Mr Robert H. Connochie, M.R.C.V.S., St Boswells, was appointed Veterinary Inspector for the Show, on the usual conditions.

*Timber Contract.*—A Minute of Meeting of Show Contracts Committee, dated 8th January, was read and approved.

The Minute recommended the acceptance of a Tender by Messrs Bell & Sime, Dundee Sawmills, Dundee, for the hire of the Timber for the Melrose Show.

*Shows Committee.*—A Minute of Meeting of Shows Committee, dated 8th January, was submitted.

The Minute dealt with the following matters :—

*Rule 44—Discoloration of Sheep.*—On the Report of a Sub-Committee, it was agreed to recommend that Rule 44 be amended so as to include all breeds of Sheep, and that the Judges of sheep be informed that they must judge the sheep according to the conditions laid down by the Society.

It was also agreed that the various Sheep Breed Societies and Associations be invited to nominate three representatives to a Meeting to discuss, with the Society, the whole question of discoloration of sheep.

*Jumping Competitions.*—On a recommendation of a Sub-Committee, it was agreed that the Regulations and Classes for the Jumping Competitions be as at Aberdeen last year. It was suggested, however, that the time taken by several of the competitors to complete the round of jumps at Melrose Show be recorded, with a view to a time limit being instituted for future Shows.

*Bacon Pig Competition.*—A letter was read from the Secretary of the Scottish Bacon Pig Committee, requesting the Society to reconsider their decision to cancel Stages II. and III. of the Competition.

After discussion, the Committee agreed to recommend that the full Bacon Pig Competition be held, as at Aberdeen last year, and it was also agreed that prize-money be offered for Stage I, as follows : £4, £3, £2, £1, £1 ; Stages II. and III., £8, £6, £4, £3, £2, £1, £1—a total of £36 (increase, £5).

It was also recommended that Mr Joseph Kirkpatrick and Mr Edgar Kirkpatrick, Thornhill, Dumfriesshire, be appointed to judge Stages II. and III.

*Military Ride and Trick Riding Display.*—It was agreed to accept the quotation of £250 from the 4/7th Dragoon Guards for a Military Ride and Trick Riding Display at Melrose, including the services of the Military Band. It was estimated that the total cost, including transport, food, &c., would be about £450.

*Sleepers.*—The following Committee was appointed to interview representatives of the two Railway Companies with regard to sleepers for the Showyard and cartage charges : Major R. W. Sharpe, Mr J. P. Ross-Taylor, Mr Alexander Murdoch, with the Chairman and Consulting Engineer.

*Showyard.*—The following Committee was appointed to visit the Showyard some time before the date of the Show, with a view to seeing that the work within the Showyard was completely finished before the opening day : Mr Robert Mac-

millan, Major S. Strang Steel, Major R. W. Sharpe, Mr J. P. Ross-Taylor, Mr Alexander Murdoch, The Master of Polwarth, along with the Consulting Engineers.

On the motion of Major R. W. Sharpe, Convener of the Shows Committee, the Minute of the Shows Committee was approved.

*Special Prizes.*—A number of Special Prizes were intimated, and votes of thanks accorded to the donors.

#### *Live Stock Industry.*

The Secretary submitted a report on the Proceedings at a Conference held on 18th December, at which were present representatives of the Scottish Chamber of Agriculture, the National Farmers' Union of Scotland, and the Institute of Auctioneers and Appraisers in Scotland, along with representatives of the Society. At that Meeting it was decided that there should be formed a Scottish Advisory Council to be called the Scottish Joint Committee on the Live Stock Trade of the Country. Mr Robert Macmillan was appointed Chairman of the Joint Committee. A Sub-Committee had drawn up a Draft Policy, which would be submitted to a full Meeting of the Joint Committee on 11th January.

#### *Sale of Diseased Plants (Scotland) Order.*

Mr John E. B. Cowper reported that he had attended, along with Mr James Paton, a Meeting held at the Offices of the Department of Agriculture on 17th December. After full discussion, it was finally agreed to make such alterations and amendments as would give protection against unjustifiable complaints, while retaining the effectiveness of the Order in preventing the sale of Diseased Seed Potatoes.

#### *Scottish Agricultural Organisation Society.*

On the motion of the Treasurer, it was unanimously agreed to confirm the proposed grant of £100 to the Scottish Agricultural Organisation Society for the year 1936.

#### *Show of 1938.*

Colonel F. J. Carruthers of Dormont, Lockerbie, moved the following resolution : "That, provided a suitable site is available, and satisfactory financial and other arrangements can be made, the Society's Show of 1938 be held in the Dumfries Show Division."

Mr Charles W. Ralston, Holmhill, Thornhill, seconded, and the motion was unanimously agreed to.

#### *Finance.*

A Minute of Meeting of Finance Committee, dated 8th January, was submitted and approved.

The Minute dealt with the following matters :—

*Investment.*—It was agreed that a sum of £2500, being amount received in repayment of Natal Government Stock, be invested in 3 per cent Funding Loan.

*Clerk of Works.*—The terms of the advertisement for a Clerk of Works were adjusted, and it was agreed that it be remitted to the following Sub-Committee to consider the Applications received and to prepare a short list for submission to the Finance Committee at their next Meeting: The Earl of Home, K.T.; Mr Robert Macmillan; Colonel F. J. Carruthers; Mr Alexander Murdoch; Colonel R. W. Walker.

*Show Plumbing Contract.*—A Specification and suggested Advertisement, prepared by the Society's Engineers, were submitted, and it was remitted to the Chairman of Directors and Colonel R. W. Walker to adjust the Specification and Advertisement, and thereafter advertise for Tenders.



## MEETING OF DIRECTORS, 5TH FEBRUARY, 1936.

Mr ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Monnave, in the Chair.

*Present.*—*Vice-Presidents*—Major C. H. Scott Plummer of Sunderland Hall, Galashuels; Colonel A. R. Trotter, M.V.O., D.S.O., of Charterhall, Duns. *Ordinary Directors*—Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James K. Lumsden; Mr William Menklem; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr John P. Sleigh; Mr A. A. Hagart Spears; Mr Phipps O. Turnbull; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr J. Hastie Brydon; Mr John E. B. Cowper; Mr Andrew D. Elliot; Mr Thomas Elliot; Mr Alexander Forbes; Mr John Hewetson; Mr Robert Macmillan; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Major S. Strang Steel; Mr James B. Stewart. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c. *Assistant Consulting Engineer*—John B. Todd, B.Sc., Ph.D., &c.

*Death of His Majesty King George V.*

The Chairman referred, in fitting terms, to the great loss which the Empire had sustained through the death of King George V., and submitted Addresses of Condolence to His Majesty King Edward VIII. and Her Majesty Queen Mary, which were adopted, the Members present upstanding.

The Addresses are appended to the biographical sketch of the late King at the beginning of this volume (pp. 10, 11).

*Accession of His Majesty King Edward VIII.*

The Secretary reported that the Society was represented at the Proclamation in Edinburgh, on 23rd January, of King Edward VIII.'s Accession to the Throne, by Mr Alexander Murdoch, Mr P. O. Turnbull, and the Secretary.

*Colonel F. J. Carruthers of Dormont.*

The Chairman conveyed to Colonel F. J. Carruthers, Honorary Secretary of the Society, the cordial congratulations of the Board of Directors on the occasion of his appointment, by His Late Majesty King George V., to the office of Lord-Lieutenant of the County of Dumfries.

Colonel Carruthers suitably replied.

*Letters.*

The following letters were submitted :—

*Lady Munro of Foulis*.—Expressing thanks for resolution of sympathy on the death of her husband, the late Sir Hector Munro of Foulis.

*Miss S. Stewart, Lochduh, Nairn*.—Conveying thanks for resolution of sympathy on the death of her father, the late Mr D. A. Stewart of Lochduh.

*Science.*

A Minute of Meeting, dated 5th February, was submitted and approved.

The Minute dealt with the following matters :—

*Schedule of Unit Values*.—The Schedule of Unit Prices of Manures and Feeding-stuffs for the current year had been revised, and it was recommended that it be printed and issued as usual.

With regard to the prices of Feeding-stuffs, the Committee considered that the prices given in February were not of much service to farmers when arranging contracts for foodstuffs in September and October, and it was accordingly recommended that the Science Committee meet again in June, in order to draw up a List of Prices of Feeding-stuffs in force at that date.

*Values of Unexhausted Manures and Feeding-stuffs.*—It was recommended that the Table of Values of Unexhausted Manures and Feeding-stuffs be re-issued, and that it be committed to Dr Tocher, Consulting Chemist, to revise it in terms of the new Unit Value.

*Melrose Show, 1936.*

*Assistant Stewards.*—Assistant Stewards of the various departments were appointed as follows: *Cattle*—Mr Alexander Munro; *Horses*—Mr John P. Slough; *Sheep, Goats, and Pigs*—Mr John Hewetson; *Forage*—Mr T. Mercer Sharp; *Grand Stands*—The Master of Polwarth; *Gates*—Mr James P. Brown; *Implements*—Mr James Paton.

*Forage.*—A Minute of Meeting of Forage Committee, dated 5th February, was read and approved.

The Minute stated that two Tenders had been received, and the Committee recommended the acceptance of the offer by the Forage Supply Co., Ltd., Springfield Mills, Leith, to supply Forage for the Show.

*Times of Judging and Parades.*—A Minute of Meeting of Stewards, dated 4th February, was read and approved.

The Minute stated that the Committee had considered and fixed the times of judging of Stock and other Sections, and the times of Parades.

The Committee recommended that the Live Stock Judging Competition take place on Thursday, 25th June, at 10 A.M., instead of Wednesday, as at Aberdeen last year.

The Committee also recommended that Military Rides and Trick Riding Displays be given by the 4/7th Dragoon Guards on the afternoon and evening of Wednesday and Thursday, and the afternoon of Friday; that the Parade of Riding Ponies take place on the Wednesday afternoon, during the interval between the Military Ride and Trick Riding, and that similar intervals on Wednesday evening, Thursday afternoon and evening, and Friday afternoon, be taken up with Sheep Dog Demonstrations.

The Committee also recommended that the prices of seats in the Grand Stand for Wednesday and Thursday be as at Aberdeen, but that on Friday the reserved seats be reduced from 2s. 6d. to 2s., and the unreserved seats and enclosures from 2s. to 1s., and that the prices of the seats and enclosures in the stands at each end of the Parade Ring be the same as that charged for the unreserved seats in the Main Grand Stand.

*Proof of Prize List.*—A proof of the Prize List and Regulations was submitted and approved for publication.

*New Implements.*—The following were appointed Judges of New Implements: Mr J. P. Ross-Taylor, Mungoswalls, Duns; Mr James Paton, Kirkness, Glen-craig; Mr John E. B. Cowper, Gogar House, Corstorphine; Mr P. O. Turnbull, Bowmont, Dunbar.

*S.W.R.I. Stand.*—With regard to the free stand granted to the S.W.R.I., a letter was submitted from Mrs Jamieson, Hon. Secretary, Roxburghshire Federation S.W.R.I., stating that the exhibit at Melrose might be housed in a small timber bungalow, and asking whether, in the event of the house being erected, the additional grant which the Society had promised up to £30 for interior fittings would still be available, although the services of the Showyard Contractor would not be necessary.

Before arriving at any decision, the Secretary was instructed to write to Mrs Jamieson, requesting her to forward a Plan of the proposed bungalow, and, at the same time, to point out that it was very desirable that the doorways should be sufficiently wide to allow of easy entrance and exit.

*School Children.*—The Secretary read a letter from the Education Officer for the County of Roxburgh, asking if the Society would be willing to admit school children in the County of Roxburgh on Thursday and Friday at reduced rates.

It was agreed that this matter be dealt with by the Secretary.

*Special Prizes.*—A number of Special Prizes were intimated, and votes of thanks accorded to the donors.

*Live Stock Industry.*

The Secretary reported that Meetings of the Scottish Joint Committee on the Live Stock Trade of the Country had been held on 11th and 22nd January. At the latter Meeting there were present representatives of various Breed Societies, and also, in a consultative capacity, representatives of the Meat Trade Organisations.

tions. The Meeting finally adjusted and approved of a Policy, copies of which were being forwarded to the Secretary of State for Scotland, the Minister of Agriculture and Fisheries, the Scottish Agricultural Committee, the Parliamentary Agricultural Committee of the House of Commons, and all Scottish Members of Parliament, together with a request that a deputation representing the Joint Committee be received to discuss the terms of the Policy at an early date.

#### *Eradication of Bracken and Land Drainage.*

A letter was read from Mr Ian M. Campbell, giving a Report on the Proceedings at a Meeting on 30th January, at which the Secretary of State for Scotland, Sir Godfrey Collins, received a deputation representative of various Agricultural bodies in Scotland.

The Chairman said that he had attended the Meeting as one of the representatives of the Society. The Secretary of State, in his reply, made it clear that no increase in the 25 per cent grant for Drainage could be looked for. There appeared, however, to be ground for hope that a similar grant might be obtained for Eradication of Bracken.

#### *Scottish Country Industries Development Trust.*

It was decided to nominate the Hon. Walter T. H. Scott, Master of Polwarth, as a representative of the Society on the Working Committee of the Scottish Country Industries Development Trust.

#### *Finance.*

A Minute of Meeting of Committee, dated 5th February, was read and approved.

The Minute dealt, *inter alia*, with the following matters:—

*Surveyor and Clerk of Works.*—On the recommendation of a Sub-Committee, the Committee approved of a list of five Applicants for the post of Surveyor and Clerk of Works. It was decided that these Applicants be interviewed on Saturday, 22nd February, with a view to recommending a name, for appointment, to the Board of Directors.

*Resignation of Assistant Consulting Engineer.*—A letter had been submitted from Dr John B. Todd, resigning from the post of Assistant Consulting Engineer, this resignation to take effect as at 21st April next. It was decided to recommend that the resignation be accepted, with regret.

#### *Grants to Local Societies*

*Cottages and Gardens.*—It was decided that, in the Rules relating to grants for best-kept Cottages and Gardens, Rule 3 be amended so as to provide that the maximum rents shall in future be £10 and £16 respectively, instead of £8 and £15 as at present.

*Grants to Horse Associations.*—On a letter from the Sanday Agricultural Association, it was decided, in view of the explanations given, that the grant of £15 be given for the current year.

#### MEETING OF DIRECTORS, 4TH MARCH 1936.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr Phipps O. Turnbull; Mr T. G. Wilson; Mr James Wither. *Extraordinary Directors*—Mr John E. B. Cowper; Mr John Hewetson; Mr J. E. Kerr; Mr Robert Macmillan; Major S. Strang Steel. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—Dr J. F. Tocher.

*Death of His Majesty King George V*

The following letters or acknowledgment of the Addresses of Condolence, sent to His Majesty King Edward VIII and Her Majesty Queen Mary, were submitted —

SCOTTISH OFFICE, WHITEHALL,  
February 1936

SIR,

I have had the honour to lay before The King the Loyal and Dutiful Address of the Highland and Agricultural Society of Scotland on the occasion of the lamented death of His late Majesty King George the Fifth, and have received The King's Commands to convey to you His Majesty's grateful Thanks for the assurances of sympathy and devotion to which it gives expression

I am, Sir, your obedient servant,

GODFREY P COLLINS

The Secretary,  
Highland and Agricultural Society of Scotland  
8 Eglinton Crescent, Edinburgh 12

SCOTTISH OFFICE, WHITEHALL,  
February 1936

SIR,

I am directed by the Secretary of State to inform you that the Address of Condolence of the Highland and Agricultural Society of Scotland on the death of His late Majesty King George the Fifth has been laid before Queen Mary whose grateful Thanks I am to convey to you

I am, Sir your obedient servant,

JOHN JEFFREY

The Secretary,  
Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent, Edinburgh 12

*Letter*

The following letter was submitted —

*Mrs Macduff, Bonhard* — Expressing thanks for its solution of sympathy on the death of her husband, the late Mr Alexander Macduff of Bonhard

*Melrose Show, 1936*

*Catering* — A Minute of Meetings of Catering Committee, held on 5th February and 4th March was submitted and approved

The Minute recommended the appointment of the following four Licensed Caterers —

The Royal Athenæum, Ltd, Union Street, Aberdeen  
Messrs M Mitchell & Co, Ltd, 2 Gloucester Place, Edinburgh  
Mr E Pfeiffer, 82 Great King Street, Edinburgh.  
Messrs Westcon, Ltd, 41 Mill Street, Ayr

The official catering in the Directors' Private Luncheon Room, for Directors and Judges, &c, would be placed in the hands of Messrs M Mitchell & Co, Ltd, Edinburgh

It was recommended that a snack counter and refreshment bar be introduced between the Members and Lady Members' Pavilions, with access from both of these buildings. The catering in this department would be placed in the hands of Mr Pfeiffer, Edinburgh

The British Women's Temperance Association would, as usual, have an unlicensed Refreshment Stand

The condition that only home fed meat shall be supplied in the Catering Stands was again imposed on all the Caterers

*Meteorological Demonstration* — A letter was read from the Department of Agriculture for Scotland, stating that, owing to pressure of other work on the staff of the Meteorological Office, arrangements for a demonstration could not be made for the current year

*Show of 1938.*

Letters were submitted from the Town Clerk of Dumfries, dated 4th and 8th February, conveying a cordial invitation to hold the Show in Dumfries in 1938.

Mr Alexander Murdoch, East Hallside, Cambuslang, said that, before accepting the invitation, they should ascertain what the town of Dumfries was prepared to do to facilitate the holding of the Show there in 1938. He understood that Dumfries was the only town visited which did not give them a free site. He did not say the Society should expect a financial contribution, but he considered that centres visited by the Show should at least provide a free site.

After some discussion, it was decided to instruct the Secretary to write to the Town Clerk of Dumfries to ascertain what the Town Council was prepared to do in the way of providing a site and otherwise facilitating the holding of the Show.

It was decided that the appointment of a Sites Committee be deferred until next Meeting.

*Eradication of Bovine Tuberculosis.*

A Minute of Meeting of Science Committee, dated 4th March, was read and approved.

The Minute stated that, in accordance with the remit from the Board, the Committee had considered the scheme submitted by Mr William Lohar, Wester Balrymonth, St Andrews, whereby it was stated that Dairy Farmers in non-breeding areas could rear their own stock and also eradicate tuberculosis without the necessity of laying down land to pasture.

After careful consideration, the Committee decided to report that the scheme appeared to them to be unnecessary, as the objects aimed at could be attained under existing conditions by private arrangement between breeders who cannot economically rear their young stock and occupiers of suitable rearing farms. Further, the proposed system of payment and the restrictions involved would, it was feared, render the scheme unacceptable to the majority of those who might be interested in it.

*Proposed Subsidy for Oats.*

Letters were submitted from the National Farmers' Union of Scotland, giving details of a Policy formulated by the Union for a subsidy for Oat Growers, and inquiring whether the Society were in agreement with the Policy, and, if so, whether they would be prepared to appoint representatives on a proposed Joint Deputation to Scottish Members of Parliament.

The Secretary stated that, after consultation with the Chairman of Directors, he had replied that it was impossible to ascertain the views of the Directors of the Society before the date of that Meeting, and that accordingly representatives on the proposed deputation could not be nominated until the Policy had been considered.

After some discussion, it was decided, on the motion of Major R. F. Brebner, that copies of the Policy be circulated to Members of the Board, with a view to its consideration at next Meeting.

*Sale of Diseased Plants (Scotland) Order.*

A letter was submitted from the Department of Agriculture, forwarding copy of Article 2 of the proposed Sale of Diseased Plants (Scotland) Order, as revised. It was stated that it was proposed to bring the Order into operation on the 1st of May next, when an Order in similar terms would be made applying to England and Wales.

*Warble Fly (Dressing of Cattle) Order, 1938.*

There was laid upon the table a copy of the Warble Fly (Dressing of Cattle) Order, 1938, which requires that all visibly infested cattle shall be treated by one of the methods described in the Order, these methods being either (1) dressing with one of the preparations described in the Order, or (2) removing the warble maggots by mechanical means from the backs of infested cattle.

In this connection, Colonel F. J. Carruthers suggested that a note be inserted in the 'Transactions' calling attention to the Order, and to Dr Stewart MacDougall's articles on the Investigations carried out by him on behalf of the Society, which appeared in previous volumes of the 'Transactions.' This suggestion was unanimously adopted.

*Finance.*

Minutes of Meetings of Committee, dated 22nd February and 4th March, were submitted.

The Minutes dealt with the following matters :—

*Master of Works.*—The Committee had interviewed five candidates for the post of Master of Works to the Society, and had decided, by a majority, to recommend the appointment of Mr Henry Raeside, 55 Macdonald Crescent, Whitecrock, Clydebank, Glasgow.

*Ayrshire Agricultural Association.*—A letter had been submitted from the Ayrshire Agricultural Association, explaining that, owing to the death of King George V., the Centenary Celebrations of that Association were to be postponed until the Show of 1937. Inquiry was made as to whether the donation of £25, promised for the current year, would be available next year.

The Committee recommended that the donation be made available for the postponed event.

*Stranraer and Rhins of Galloway Agricultural Society.*—A similar request from the Stranraer and Rhins of Galloway Agricultural Society, with respect to the grant of £15 promised to that Society, was considered, and it was decided that the same procedure be followed in the case of that Society.

*Scottish National Union of Allotment Holders.*—On an application from the Scottish National Union of Allotment Holders, it was recommended that the grant to that body of medals and prize-money be increased from 8 Medals and £8 to 15 Medals and £15.

*Royal (Dick) Veterinary College.*—It was recommended that the number of Silver Medals awarded annually to Students of the Royal (Dick) Veterinary College be increased from 11 to 13. This increase was rendered desirable through the extension of the curriculum by the addition of further subjects of examination. The two extra Medals would be offered for Histology and Embryology, and for Parasitology.

A letter had also been submitted from the Secretary of the College with regard to the approaching Jubilee of Principal O. Charnock Bradley, and inviting the Society to appoint a representative to act on a Committee which was in process of formation. It was recommended that Dr T. G. Nasmyth, the Society's representative on the Board of Governors of the College, should also represent the Society on the Committee referred to.

With regard to the appointment of *Master of Works*, Mr Raeside was called into the Meeting, and answered questions put to him by various Members of the Board. He then withdrew, and the Board decided to approve of the recommendation of the Committee that Mr Henry Raeside be appointed.

It was remitted to the Chairman, Treasurer, and Honorary Secretary, along with the Secretary, to interview Mr Raeside, and adjust the terms of his appointment.

The Minutes of the Finance Committee were otherwise approved.

## PROCEEDINGS AT GENERAL MEETINGS.

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GENERAL MEETING, 5TH JUNE 1935.

THE EARL OF CAITHNESS, C.B.E., President of the Society, in the Chair.

### *New Members.*

One hundred and ninety-one candidates were balloted for and admitted members of the Society. In this list appeared the names of two candidates who were elected Free Life Members in view of having succeeded in obtaining the Society's First-Class Certificate in Forestry at an examination held in March last. The Secretary pointed out that, in accordance with the decision of the Directors on 6th February, that was the last examination in Forestry which would be held by the Society.

### *Election of Office-Bearers.*

The following noblemen and gentlemen were elected office-bearers of the Society for the year 1935-36:—

*President.*—The Earl of Dalkeith, Eildon Hall, St Boswells.

*Vice-Presidents.*—The Earl of Haddington, M.C., Mellerstain, Gordon; Major Charles H. Scott Plummer of Sunderland Hall, Galashiels; Colonel A. R. Trotter, M.V.O., D.S.O., Charterhall, Duns; Captain R. J. Thomson, Kaimes, West Linton.

*Ordinary Directors, 1932.*—Captain Thomas Elliot, Thirlestane, Lauder; Mr Phipps O. Turnbull, Bowmont, Dunbar; Mr T. G. Wilson, Carbeth Home Farm, Balfour Station; Mr W. P. Gilmour, Balmangan, Kirkcudbright; Mr Alexander Munro of Leanaich, Culloden Moor, Inverness; Mr Gavin Ralston, Glamis House, Glamis; Mr George Buchanan, Hunterhill Farm, Paisley; Mr James Durno, Crichton, Inverurie.

1933.—Dr T. G. Nasmyth, Canaan Lodge, 43 Canaan Lane, Edinburgh; Mr John W. Prentice, Craigrie Farm, Clackmannan; Mr James Wyllie, Tinwald Downs, Dumfries; Mr William Fraser, Knockomie, Forres; Mr Thomas Clark, Muirtons, Perth; Lord Rowallan, Rowallan, Kilmarnock; Mr George Grant of Glenfarclas, Blackboat; The Hon. Walter T. H. Scott, Master of Polwarth, Harden, Hawick.

1934.—Mr James R. Lumsden of Arden, Dumbartonshire; Mr Charles W. Ralston, Holmhill, Thornhill, Dumfriesshire; Sir Hector D. Mackenzie of Gairloch, Bart., Conan House, Conan Bridge; Mr James Paton, Kirkness, Glencraig; Mr Alexander Murdoch, East Hallside, Cambuslang; Colonel Robert W. Walker, Culter Lodge, Milltimber, Aberdeenshire; Mr Thomas Templeton, Sandyknowe, Kelso; Major R. F. Brebner, The Leuchold, Dalmeny House, Edinburgh.

1935.—Mr James Withers, Awhirk, Stranraer; Mr James P. Brown, Dipple, Fochabers; Mr William Meiklem, Bennochy Park, Kirkcaldy; Mr A. A. Hagart Speirs of Elderslie, Houston House, Renfrewshire; Mr John P. Sleight of St John's Wells, Fyvie; Major Robert W. Sharpe of The Park, Earlstoun; Mr G.

Bertram Shields, 13 Moray Place, Edinburgh; Mr T. Mercer Sharp, Bardrill, Blackford.

*Extraordinary Directors.*—Mr James Kilpatrick, Craigie Mains, Kilmarnock; Mr J. P. Ross-Taylor, Mungoswalls, Duns; Mr J. E. Kerr of Harviestoun, Dollar; Mr Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive; Mr John E. B. Cowper, Gogar House, Edinburgh; Mr James M'Laren, Cornon, Bridge of Allan; Mr John Hewelson, Baltersan, Newton Stewart; Mr Ian M. Campbell, Bal Blair, Invershin; Mr Alexander Forbes, Rettie, Banff; Mr James H. Steele, 61 Harrison Road, Edinburgh.

*Show District.*—Mr J. Hastie Brydon, Haddon, Kelso; Provost F. R. N. Curle, Melrose; Mr Andrew D. Elliot of Kettelsiel, Greenlaw; Mr Thomas Elliot, Kirrdean, Newcastleton; Mr Hugh H. Fleming, Howford, Innerleithen; Mr James Mitchell, Henderland, Selkirk; Mr R. A. Robertson, Yetholm Mains, Kelso; Mr T. W. Robson Scott, Lanton Tower, Jedburgh; Major S. Strang Steel of Philiphaugh, Selkirk; Mr James B. Stewart, Faughhill, St Boswells.

*Treasurer.*—The Earl of Home, K.T., The Hirsell, Coldstream.

*Honorary Secretary.*—Colonel F. J. Carruthers of Dormont, Lockerbie.

### *Special Grants.*

The Earl of Home, K.T., Treasurer of the Society, moved approval of the following Special Grants which were recommended by the Board of Directors:—

- (1) £500 to the Macaulay Institute for Soil Research, Aberdeen.
- (2) £200, for the current year, to the Animal Diseases Research Association.
- (3) £100, for the current year, to the Glasgow Veterinary College.
- (4) £50, for the current year, to the Highland Reel and Strathspey Society.

Mr James R. Lumsden of Arden, Dumbartonshire, seconded, and the Grants were approved.

### *Aberdeen Show, 1935.*

Mr James Durno, Crichto, Inverurie, Convener of the Shows Committee, reported that the arrangements for the forthcoming Show at Aberdeen on 18th June and three following days were well advanced. As previously reported, the Corporation of Aberdeen had kindly placed at the disposal of the Society an excellent site on the lands of Seaton. The site was readily accessible from the city, being only 1½ miles from the centre of the town. It lay to the east of King Street, near the Bridge of Don, to which there was a good service of tramcars.

The Corporation, through its Links and Parks Department, had carried out such levelling as was required, and had given careful attention to top-dressing and mowing, so that a good surface would be available. In addition to the site, a free supply of water was being provided, and both gas and electric current would be laid on to the ground. There was ample accommodation for the parking of cars close to the main entrance. The Corporation were co-operating with the Society in every way calculated to promote the success of the Show.

The planning of the Showyard on that new site had presented some difficulties, but it was believed that the lay-out which had been adopted would be found both compact and convenient.

A satisfactory entry of Live Stock had been obtained. As compared with Aberdeen Show in 1928, entries of Cattle, Sheep, and Pigs all showed decided increases. Horses were slightly down, and also Poultry. Horse-shoeing, Rural Industries, and Live Stock Judging showed increases, while in other sections the numbers were well maintained.

The Horticultural Section had again attracted wide support, the space allocated for Stands being fully equal to that of last year's Show at Glasgow. The Butter-making Competitions would again extend throughout the four days of the Show.

Implements, Machinery, and general exhibits had also secured a large entry. The total frontage of these Stands was over 1000 feet in excess of that at any previous Show at the same centre.

In addition to the usual parades of Prize Stock and Jumping Competitions, an exceptionally attractive programme of events had been arranged for the Wednesday evening, the Thursday afternoon and evening, and the Friday afternoon. Those additional items consisted of a full-dress Musical Ride and Trick-Riding Display by the Royal Scots Greys, and also a Demonstration of Sheep-Dog Working.

Provided the Meeting was favoured with good weather, there appeared to be every reason to hope that the thirteenth Show at Aberdeen would be an outstanding success.



*Melrose Show, 1936.*

Major R. W. Sharpe of The Park, Earlstoun, Vice-Convener of the Shows Committee, reported that, as already intimated, the Show of 1936 would be held at Melrose. The Directors had accepted an invitation to hold the Show on a site at The Annay, which is in close proximity to the town of Melrose, and within half a mile of the railway station. The site consisted of several fields, which were practically level, had an excellent surface, and adjoined the main road between Edinburgh and Hawick. A Committee had been negotiating with a Local Joint Committee, comprising representatives of Melrose Town Council, Galashiels Town Council, and the County Council of Roxburgh, with regard to such matters as the supply of water, gas, electric current, &c., and it was believed that any difficulties in connection with these would be successfully surmounted.

The President and Office-bearers for the year had just been elected, and the active work of preparation for the Show would commence soon after the conclusion of the Show at Aberdeen.

*Show of 1937.*

Mr Robert Macmillan of Holm of Dalquhairn, Woodloa, Moniaivo, Chairman of Directors, reported that invitations had been received from the Town Councils of Stirling, Alloa, and Bridge of Allan to hold the Show of 1937 in their respective areas. A Committee of Directors had examined the various sites proposed, and, after careful consideration, had decided to recommend that the Show be held at Alloa on a site placed at the disposal of the Town Council of Alloa and the Society by the Earl of Mar and Kellie. That was the site on which the Show of 1929 was held. The Directors had unanimously approved of the recommendation.

*Agricultural Education.*

Mr Alexander Murdoch, East Hallside, Cambuslang, submitted the following report on the Examination held at Leeds from 9th to 16th April for the National Diploma in Agriculture. 133 candidates presented themselves for examination. 43 candidates were from Scotland. As a result of the Examination 49 Diplomas were awarded. Of the 133 candidates, 9 appeared for all the subjects, and 3 of these obtained the Diploma. 61 had passed certain subjects previously and were completing the Examination this year, and of these 46 obtained the Diploma. The remaining 63 presented themselves for groups of three, four, or five subjects, and of these 41 passed in the subjects for which they appeared and were entitled to appear for the remaining subjects in 1936 or 1937.

*Report by Chemist.*

Dr J. F. Tocher, Consulting Chemist to the Society, submitted a report on the work done in his department during the past half-year. The substance of Dr Tocher's report appears on pp. 219 to 226 of this volume.

*Vote of Thanks.*

Sir Edmund Findlay of Aberlour, Bt., said their Chairman deserved a very hearty vote of thanks for his conduct in the Chair. His occupation of the Chair had helped the Society, and he was sure the members would agree with him when he thanked the President for what he had done. If Aberdeenshire, which was recognised as one of the shrewdest counties, had elected the Earl of Caithness as Convener of the county, he thought the Society had not done badly in asking him to be President.

The Earl of Caithness, in acknowledging the vote of thanks, said he had considerable interests in agriculture, and he knew something of what the troubles in the industry were. They were all, he added, looking forward to having a very successful Show, and he was sure there was every prospect of it.

GENERAL MEETING OF MEMBERS HELD IN THE SHOWYARD,  
ABERDEEN, 19TH JUNE 1935.

THE EARL OF CAITHNESS, C.B.E., President, in the Chair.

The Chairman said he should like, in the first place, to say how very highly he appreciated the honour which they had conferred upon him by electing him President of the Society for the year. To one who was born and brought up in Aberdeen, and whose home was now in the county, it was particularly gratifying to find himself in that position. He liked also to remember that it was a kinsman of his who, in the distant past, was present at the birth of agriculture in Scotland, towards the end of the eighteenth century—Sir John Sinclair of Ulster, whose Statistical Account of Scotland gave a detailed statement of agriculture at that period, at the very moment when the Highland and Agricultural Society itself first saw daylight. From those small beginnings, and from that parlous state, as set out in that review, there had evolved that complete system of agriculture which had marked Scotsmen as the leading agriculturists in the world, and the Society had throughout—during those 150 years of its existence—been their guide, philosopher, and friend.

But they had come, in this year of Jubilee, to think in terms of twenty-five years at a time, and perhaps that was enough. The changes that had taken place during that period were more in methods of marketing and so forth, than in principles of agriculture, methods that they had been driven to adopt by force of circumstances rather than from actual choice. Excessive production throughout the world had led to endless complications. The markets here and elsewhere had been disorganised, and Great Britain, as the convenient dumping ground, had been flooded with superfluities. It was not for him to express an opinion on the steps taken to protect the home market, and the Scottish farmers in particular. They lived in hopes of more effective results in the future than they had seen in the past, all the more so because throughout Scotland some 25 per cent of the holdings were now owned by the occupiers. In spite of all the difficulties of the last few years, Scottish farmers had shown themselves as efficient as ever, and the quality of their stock and of their crops was still the admiration of the world.

The Society had come this year to a county which had played its part in the history of agriculture, and they claimed to have the largest acreage in oats, turnips, and rotational grass, and also the largest number of horses, cattle, and pigs. But he must not enlarge on that. They were modest people in Aberdeen. They did not blow their own trumpets: perhaps they did not need to. They could go down into the Showyard and they would hear plenty of trumpeters. The Aberdeen-Angus were saluting the land of their forefathers and the Shorthorns were singing a dirge in memory of William Duthie of Collynie, who did so much in his day to send out their species to the four corners of the world.

Of late years, times had been difficult, but the agriculturists of to-day had shown courage throughout, and now they presented to them an exhibition of the highest standard of production, both in stock and in the other industries dependent on the soil of the country. The ordinary farmer saw there the ideal to which he might attain, and was encouraged to pursue his calling with fresh hope.

To all it was an education, and he should like to add that the Directors' decision to admit school children was highly appreciated in a part of Scotland which took some pride in its educational facilities; and they were glad to think that the children of the city and the neighbouring counties were being given an object-lesson which was at once so practical and so beneficial. They would, they hoped, realise that a country life had its attractions and its rewards, and this might perhaps have some effect in checking the ever-increasing trend of country life towards the centres of the large towns.

The Society had during its long existence done much to encourage education and research in all matters affecting the advancement of agriculture in every branch of that industry, and it had inspired the activities in that direction which had been so noticeable in that particular neighbourhood. He need only mention the College of Agriculture, with its model farm at Craibstone, the Rowett Institute, and the Macaulay Institute—all of whose energies were directed to scientific research, followed by a practical demonstration of the effect of their discoveries. The result of this scientific study throughout Scotland was reflected in the high standard of the exhibits at the Annual Shows of the Highland Society.

What impressed one most on taking a survey of this Show was its comprehensive character; everything conceivable was brought within its scope as incidental to agriculture—machinery and appliances of all kinds and description. These were

being perpetually altered and improved, and every encouragement was given by the Society for new inventions, in the form of premiums which were awarded from time to time. The numerous demonstrations and competitions all went to show the tremendous influence which agriculture itself, and the numerous industries and interests which arose out of it, played in the life of this country. In conclusion, Lord Caithness said it was a matter of pride to the county of Aberdeen, as he was sure it was to the city, that they should have chosen to come this year to the banks of the Don, where city and county met, and they all hoped that the Highland Show of 1935 would be a memorable one in every way.

Might he thank them once more for allowing him to occupy that proud position that day.

#### *Votes of Thanks.*

Mr Robert Macmillan, Holm of Dalquhairn, Woodlea, Moniaive, Chairman of Directors, moved: "That a cordial vote of thanks be accorded to the Lord Provost, Magistrates, and Council of the city of Aberdeen for the free site and free supply of water provided for the Show, for the time and labour they have expended in making the ground suitable for the purpose, and for their co-operation and assistance in all matters tending to promote the success of the Show." No words of his, he said, were needed to commend the resolution to their acceptance. The resolution, he remarked, expressed thanks for the free supply of water. They were thankful that the water was not so plentiful as it was a few days ago.

Mr J. P. Ross-Taylor, Mungoswalls, Duns, in seconding, said that their Annual Show was something more than an agricultural show—it was a national exhibition. The city of Aberdeen and the county of Aberdeen were very closely allied to the agricultural industry, and they had afforded the Society a welcome that one would expect from an agricultural community. The Directors of the Society were very grateful to the Lord Provost, his Council, and the officials of the city for what they had done for the Show. The City Engineer, Mr Henderson, and the Parks Superintendent, Mr Clark, had been fighting the elements for the last three weeks, and he thought it would be admitted these two gentlemen had won the first two rounds. He hoped that at the end of the fourth day they would be able to say they had won all four rounds.

Lord Provost Alexander, in acknowledging the vote of thanks, said it had been an honour to the city to welcome the Highland and Agricultural Society for the thirteenth time to Aberdeen. The number had looked as if it might be unlucky, but by the weather conditions of Tuesday and yesterday it had entirely belied its reputation. Lord Caithness had referred, in terms which he warmly supported, to the very happy relations which existed between the city of Aberdeen and the counties surrounding it. These relations were not only commercial, but of a much more intimate character. He mentioned that the value of the live-stock which passed through the auction marts of Aberdeen in a year amounted to £4,000,000, a figure which gave some idea of the importance of the agricultural industry to them. The number of cattle, sheep, and pigs slaughtered in Aberdeen for the dead-meat trade amounted to £200,000 a year. But he was thinking at the moment of what was perhaps of more importance, the social and racial links which bound the city to the county. The foundations of Aberdeen were laid in the county. He imagined there was hardly a man or woman in Aberdeen whose father or mother had not come, as his did, from the county of Aberdeen, Kincardineshire, or Banffshire. It was that which, he thought, gave the city its strength, a strength of the utmost value, and which he hoped this country as a whole would never lose—the strength which came from having its roots in the land.

Reference had been made by Lord Caithness to the fact that this was the Jubilee year of His Majesty King George. He recalled vividly that the Society's Show was held in Aberdeen in 1894. It was honoured by the presence of the Duke of York, now their Sovereign. That was forty-one years ago, and a happy coincidence was that on that occasion the Society had the honour and pleasure of sending a telegram of congratulation to the Duke and Duchess of York upon the birth of the present Prince of Wales.

The city of Aberdeen was proud to have the Society's Show there. He would convey their acknowledgments to his colleagues and to the officials who had worked so admirably during the past week in the interests of the Show. They hoped that in due course the people of Aberdeen would again have the pleasure of welcoming the Show to the North of Scotland.

Mr Alexander Murdoch, East Hallside, Cambuslang, proposed a vote of thanks to Colonel R. W. Walker, Convener, and the members of the Local Committee of Management for all the work they had undertaken and successfully carried out in connection with the Show. The Committee, he said, comprised about seventy members from the various counties connected with the Aberdeen Show Division.

They had been extremely fortunate in selecting as Convener Colonel Walker. He was thoroughly satisfied they could not have selected a better man for the job. He and his Committee had done their work in a most successful manner, and he was sure they would give to Colonel Walker and his Committee a most hearty vote of thanks.

Lord Rowallan, in seconding, said he was sure it was with a feeling of deep regret that they heard a few months ago that Colonel Walker had decided to leave the realms of practical agriculture, but he did hope that they might look forward to having his services on the Local Committee at the next Aberdeen Show of the Society. It would be the wish of everyone, he felt sure, that the position should be filled once more by the present Convener. It was a continual source of astonishment to see how the Local Committee carried out the work so efficiently, not only before the Show, but also during the Show, when they displayed unflinching zeal and interest as attending members. One would think from the enthusiasm and the keenness they showed that it was the beginning of their labours and not the end of them, and he felt they should accord most heartily the vote of thanks proposed by Mr Murdoch.

Colonel R. W. Walker, in replying, expressed his thanks to Lord Provost Alexander for the splendid help he had given. He had had an excellent Committee, he said, and they had worked well, but he thought they owed a great deal to the Lord Provost and his staff. He would particularly like to mention Mr W. B. Clark, the Parks Superintendent. His staff had been there working to all hours trying to put things right. They had got a Showyard of which they might be proud.

Major S. Strang Steel of Philiphaugh, Selkirk, submitted a resolution recording the Society's appreciation of the satisfactory arrangements made by the railway companies for the expeditious transport of stock, implements, and visitors to the Show. The success of the Show, he said, depended to a great extent upon the facilities afforded by the railway companies. It was beyond dispute that the safety and comfort of the British railways was the best in the whole world. They were all agreed that the London, Midland, and Scottish Railway and the London and North Eastern Railway had lived up to their great reputation on this occasion.

Major R. F. Brebner, The Leuchold, Dalmeny, said, as a native of Aberdeenshire, it gave him very great pleasure to second the resolution. He was old enough to remember the great changes that had taken place in the railways in the last forty or fifty years. They had travelled a long way from the conditions of the old days. The railway arrangements for that Show had been most excellent and had greatly facilitated the work of the Directors.

Mr A. R. Gray, Aberdeen, a Director of the London and North Eastern Railway Company, said that expression of the Society's appreciation would be highly valued by all in the railway service whose efforts had helped to make that great Show such a success. He need not say it was no easy task they had to face. Close upon 1000 tons of implements and other traffic had been delivered to the Showyard by the railway companies without, so far as he had learned, any serious hitch or accident of any kind. That was an achievement they were entitled to be proud of. The change of site made it necessary to reorganise the system of transfer, and the problem had been given much thought and consideration by the local officials for many weeks. Thanks, however, to the admirable arrangements in the Yard by Mr John Stirton, Secretary of the Society, and Professor Stanfield, and not less to the invaluable advice and help given by the City Engineer and Chief Constable and by all their assistants, all these difficulties were overcome. It was pleasing to know that their work had earned the Society's approval. He expressed the hope that the Show of 1935 would create a fresh record in this part of the country.

#### *Two New Trophies.*

The Chairman announced that the Society had accepted the custody of two new trophies. One was the Silver Challenge Cup presented by Mr and Mrs F. A. Rottenburg, Lochlane, Crieff, for the best group of Blackface sheep, and won by Mr Rottenburg. The other was the Kinmonth Challenge Quaich for the best Highland and Western Island pony, presented by Mrs Moncrieff Wright, Bridge of Earn, in memory of her husband, the late John Moncrieff Wright, and won by Miss Kathleen MacKenzie.

#### *Vote of Thanks to the President.*

Mr Ian M. Campbell, Bal Blair, Invershin, in moving a vote of thanks to the President, said that Lord Caithness had undertaken the office of President not only as a matter of duty but also on account of the fact that he was deeply interested

in the agricultural industry. From the moment it was known Lord Caithness was to be President in 1935, it was quite apparent to all of them connected with the arrangements for the Show that it would be through no apathy on his part if the Show were not a success. Lord Caithness had entered into the life of the Society in a way that was in keeping with all his illustrious predecessors in that office.

The Chairman, in reply, said his duties had been very light and very pleasant, and he had enjoyed them.

#### ANNIVERSARY GENERAL MEETING, 8TH JANUARY 1936.

The DUKE OF Buccleuch and Queensberry, G.C.V.O., President, in the Chair.

His Grace said that, before commencing the business of the Meeting, he would like to express his gratitude to his fellow-members for the honour they had done him in appointing him President for the year. They all hoped the Society would have a very successful Show in the Border District that year.

#### *Annual Report.*

Mr Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive, Chairman of Directors, moved the adoption of the Annual Report by the Directors. He pointed out that some of the items in the Report would be the subject of special resolutions later on.

With regard to Melrose Show, he reminded the Members that the date had been fixed for 23rd-26th June, inclusive. The Show would be held on a site at The Annay, which was in close proximity to the town of Melrose and within half a mile of the railway station. The site consisted of several fields which were practically level, had an excellent surface, and adjoined the main road between Edinburgh and Hawick. The amount to be offered in prizes from the Society's own funds reached a total of £4015, compared with £3597 at the previous Border Show held at Kelso in 1926.

The Show of 1937 was to be held at Alloa, on the same site as that on which the Show was held in 1929.

Major R. W. Sharpe of The Park, Earlstoun, Convenor of the Shows Committee, in seconding, said they were all very hopeful that the Show at Melrose would be successful. The site was one of the most attractive they had ever had. The Directors, he said, had been very generous in the matter of prizes, and the money offered was larger than at the last Border Show. It was interesting to note that the Classes for Hunters were much enlarged. They hoped that the Pony Clubs in the Border District would support the Classes for Riding Ponies. There were also to be Classes for Shepherds' Pack Sheep, and they hoped that these would be well filled. Given good weather, there was every reason to hope that the Melrose Show would be even more successful than the Kelso Show in 1926.

The Report was unanimously adopted.

#### *Election of Members.*

The Secretary submitted a list of 119 Candidates for election to Membership. These were balloted for and duly elected.

#### *Annual Accounts and Special Grants.*

The Earl of Home, K.T., Treasurer, submitted the Accounts of the Society for the year ended 30th November 1935, of which, he said, all had received copies. Mr Murdoch, who was to second the motion for the adoption of the Accounts, had prepared some very interesting figures with regard to the Revenue and Expenditure of the Society, and he hoped Mr Murdoch would tell the Members about them. There was a feeling amongst the Members, and others, that large sums were being amassed by the Society, and that the Society was rather stingy in disbursing them. He hoped those figures would enlighten all those people who had formed that opinion. He formally moved the adoption of the Accounts and

approval of the following grants: £100 to the Scottish Agricultural Organisation Society; £10 to the Scottish Society for the Prevention of Cruelty to Animals.

Mr Alexander Murdoch, East Hallside, Cambuslang, in seconding, said that if the Members would turn to page 3 of the Accounts, they would find that the total funds of the Society amounted to £180,235, as compared with £181,247 at 30th November 1934, a difference of approximately £1000. The difference was accounted for by the fact that payments during the year exceeded receipts by £136, and that there had been a fall in the value of the Society's Investments. Excluding Show Receipts and Payments, it would be found that the Ordinary Receipts amounted to £10,339, and the Ordinary Payments were £9756, leaving a surplus of £583. Including the credit balance from the Aberdeen Show, £607, there was a total surplus for the year of £1190. Deducting the sum of £1326, the amount which was given in Special Grants during the year, there was a debit balance of £136. Among the Receipts was included the sum of £1230 received for Life-Membership Subscriptions. In his opinion, that sum should be put to Capital, and not to Revenue. Therefore, not only had they spent £136 in excess of their Receipts, but they had spent, in addition, the whole of their Life-Membership Subscriptions paid during the year 1935. He thought that these figures proved that the Highland Society was not hoarding money, as many Members thought they were. Mr Murdoch added that, if it were not for the substantial reserves, the Society could not carry on the good work they were doing, and give those Special Grants to Local Societies and to the various Institutes throughout Scotland. They spent £1300 in Special Grants, in addition to the sum of £1000 given annually to Local Agricultural Societies.

The adoption of the Accounts and approval of the Special Grants was put from the Chair, and unanimously agreed to.

#### *Argyll Naval Fund.*

Mr James R. Lumsden of Arden, Dumbartonshire, submitted the Accounts of the Argyll Naval Fund for the year ended 30th November 1935. He said they would find a Statement of the Funds on page 7 of the Report. They would see that the Income from the Fund was used to provide Annual Grants to young men entering the Navy, who were the sons of gentlemen connected with the Highlands not in affluent circumstances. The Income for the year amounted to £331, 13s. 6d., whilst the Expenditure was £268, 13s., comprising grants of £40 each to six Naval Cadets, £20 to one Naval Cadet, and a sum of £8, 3s. for miscellaneous expenses. There were at present two vacancies, and, although these had been advertised, so far no applications had been received. He would like to draw the attention of Members to that fact, in case they might know of suitable young men eligible to apply for these grants.

Mr J. Milne Henderson, Edinburgh, said he wondered if it were possible to extend the privilege to those entering the Indian Navy as well as the Home Navy.

The Secretary explained that it would require an alteration in the Deed of Foundation. The Fund was founded by John, Fifth Duke of Argyll, the first President of the Society, 150 years ago. He was not prepared to say, at that moment, what procedure would be necessary to alter the Deed of Foundation, but certainly some legal procedure would be necessary.

Mr Henderson said he would be quite satisfied if the Directors were good enough to look into the matter.

The Accounts of the Argyll Naval Fund were adopted.

#### *Grants to Local Societies.*

Major R. W. Sharpe of The Park, Earliston, Convener of the Shows Committee, formally moved the adoption of the Report, and this was agreed to. In 1935, he said, grants of money and medals were given to 88 Local Agricultural Societies throughout Scotland. The total expenditure under this head, including Long Service Certificates and Medals, amounted to £977, 19s. 9d. In 1936, the estimated total expenditure was £1101, 19s. 3d.

#### *Show of 1938.*

On the motion of Colonel F. J. Carruthers of Dormont, Lockerbie, seconded by Mr Charles W. Ralston, Holmhill, Thornhill, the following resolution was adopted: "That, provided a suitable site is available, and satisfactory financial and other arrangements can be made, the Society's Show of 1938 be held in the Dumfries Show Division."

*Consulting Veterinary Surgeon.*

Mr T. M. Tod of West Brackly, Kinross, submitted the following motion, the terms of which appeared under his name on the Agenda: "That the Society consider the advisability of appointing a Consulting Veterinary Surgeon, from whom the Members of the Society may obtain post-mortems or advice at a nominal fee of, say, 5s."

In speaking to the motion, Mr Tod said that last year he had had a heavy mortality amongst his ewes, for which there appeared no apparent cause. With the view to obtaining expert advice, he had looked up the 'Transactions' to see if the Society had a Veterinary Surgeon to whom he could apply, but could find no one to whom he could send some of the intestines for examination.

Mr J. Milne Henderson seconded.

Colonel F. J. Carruthers, in moving a direct negative, said that he considered such an appointment entirely unnecessary. If they looked at the Annual Report, they would see that the Society contributed the sum of £200 annually to the Animal Diseases Research Association at Moredun, Edinburgh. He considered that that was the place to which carcasses should be sent for examination. Mr Tod, on referring to the 'Transactions,' should have seen an account of the work carried out by the Animal Diseases Research Association, which dealt almost entirely with sheep diseases. No single Veterinary Surgeon could give anything like so valuable advice as that Association on the subject of Sheep Diseases. The Agricultural Colleges were also willing to help. Such an appointment as Mr Tod suggested would, he considered, not only be extravagant, but also useless.

Dr T. G. Nasmith, in seconding the amendment, said that it would be perfectly useless to appoint one man. Even if there were six men, they could not cover the whole of Scotland. Moreover, the expense would be enormous.

The Chairman said they had every sympathy with Mr Tod in the losses he had sustained, but he had a strong feeling that the method proposed in his motion was not really sound or practical. There were better ways of obtaining the examination required.

Mr Tod said he was not aware that he could have sent specimens to the Animal Diseases Research Association, and further, he did not like to ask any Association to conduct an examination without paying for it. He would like to know if there was a Scale of Fees chargeable by that Association.

The Secretary said that he did not think that any fees were charged.

Mr A. R. Milroy, Secretary of the Animal Diseases Research Association, said that while the Association were engaged in research problems, they did try to help farmers in cases where some obscure disease presented difficulty. The Association had no definite Scale of Fees. If any fee were charged, it would depend very much on the amount of work which had to be done, but in any case would be moderate.

Mr Robert Macmillan said that it appeared to him that the solution of the problem would be that every farmer in Scotland ought to be a Member of the Animal Diseases Research Association.

Mr Tod thereafter withdrew his motion.

*Chemist's Report.*

In the absence, through illness, of Dr J. F. Tocher, Consulting Chemist to the Society, his Report was submitted by Major R. W. Sharpe, Convener of the Science Committee. The substance of the Report appears on pp. 219 to 226 of this volume.

*Live Stock Trade.*

Mr William I. Elliot, Middleton, Stow, asked if any information could be given regarding the recent Conference on the Live Stock Industry. The Breed Societies, he said, were anxious to join in the movement, and would be very grateful if they could have representation on the Scottish Joint Committee.

Mr J. P. Ross-Taylor, Mungoswells, Duns, said they were all aware of the fact that the Highland Society had convened a Conference of representatives of the Scottish Chamber of Agriculture, the National Farmers' Union of Scotland, and the Institute of Auctioneers and Appraisers in Scotland. A Conference had been held about the middle of December, when it was decided that some action should be taken on behalf of the Live Stock interests of Scotland, with a view to placing the claims of those interests before the Government. The Committee had decided to appoint a small Sub-Committee to draft a Policy. That Committee had met

last week, and the Policy, as framed by them, would be submitted to a full Meeting of the Joint Committee on Saturday, 11th January. He assured Mr Elliot that any request from a Breed Society to appoint representatives on the Joint Committee would be very carefully considered.

Mr J. Milne Henderson asked why Scotland and England could not act together and speak with one voice.

Mr Ross-Taylor said that he had attended Conferences in London called by the Central and Associated Chambers of Agriculture. Unfortunately, the Producers' representatives at these meetings were very much in the minority. On his Report, the Directors had decided to take no further part in the formation of a Joint Committee in London, and instead had agreed to convene the Conference above referred to.

Mr W. F. Bosomworth, Edinburgh, pointed out that the inadequate representation of Producers on this body in London was largely due to the fact that the Farmers' Unions in England and Scotland had not seen their way to appoint representatives.

*Vote of Thanks.*

On the motion of Dr T. G. Nasmyth, a hearty vote of thanks was accorded to the Duke of Buccleuch and Queensberry for his conduct in the Chair.

The President briefly returned thanks, and said he would like to make an appeal to all Border people, and to people from a much wider area, to visit the Society's Show at Melrose.





# APPENDIX

## PREMIUM BOOK

OF

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND 1936

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Address for communications:

JOHN STIRTON, Secretary,  
The Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent,  
Edinburgh 12.

## GENERAL NOTICE.

THE HIGHLAND SOCIETY was instituted in the year 1784, and incorporated by Royal Charter in 1787. Its operation was at first limited to matters connected with the improvement of the Highlands of Scotland; but the supervision of certain departments, proper to that part of the country, having been subsequently committed to special Boards of Management, several of the earlier objects contemplated by the Society were abandoned, while the progress of agriculture led to the adoption of others of a more general character. The exertions of the Society were thus early extended to the whole of Scotland, and have since been continuously directed to the promotion of the science and practice of agriculture in all its branches.

In accordance with this more enlarged sphere of action, the original title of the Society was altered, under a Royal Charter, in 1834, to THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The Society avoids questions of political controversy, but in other public matters of practical concern to agriculture it seeks to guard and promote, by every means in its power, the welfare of all interested in the agriculture of Scotland.

Among the more important measures which have been effected by the Society are—

1. Agricultural Meetings and General Shows of Stock, Implements, &c., held in the principal towns of Scotland, at which exhibitors from all parts of Great Britain, Northern Ireland and the Irish Free State are allowed to compete.
2. A system of District Shows instituted for the purpose of improving the breeds of Stock most suitable for different parts of the country, and of aiding and directing the efforts of Local Agricultural Societies and Associations.
3. A scheme of Awards to Farm Workers for long and approved service in Scotland.
4. The encouragement of Agricultural Education, under powers conferred by a supplementary Royal Charter, granted in 1856, and authorising the Society to grant Diplomas to Students of Agriculture; and by giving grants in aid of education in Agriculture and allied sciences. In 1900 the Society discontinued its own Examination, and instituted jointly with the Royal Agricultural Society of England an Examination for a National Diploma in Agriculture.
5. The institution of an Examination for a National Diploma in Dairying, jointly with the Royal Agricultural Society of England and the British Dairy Farmers' Association.
6. The institution of an Examination in Forestry for First and Second Class Certificates. Terminated in 1935 in accordance with arrangements made with the Royal Scottish Forestry Society.
7. The advancement of the Veterinary Art, by conferring Certificates on Students who have passed through a prescribed curriculum, and who are found, by public examination, qualified to practise. Terminated in 1881 in accordance with arrangements made with the Royal College of Veterinary Surgeons.
8. The appointment of a Chemist for the purpose of promoting the application of science to agriculture.
9. The establishment of a Botanical Department.
10. The appointment of an Entomologist to advise members regarding insect pests, &c.
11. The annual publication of the 'Transactions,' comprehending papers by selected writers, Prize Reports, and reports of experiments, also an abstract of the business at Board and General Meetings, and other communications.
12. The management of a fund left by John, 5th Duke of Argyll (the original President of the Society), to assist young natives of the Highlands who enter His Majesty's Navy.

## CONSTITUTION AND MANAGEMENT;

The general business of THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND is conducted under the sanction and control of the Royal Charters, referred to above, which authorise the enactment of Bye-Laws.

The Office-Bearers consist of a President, Four Vice-Presidents, Thirty-two Ordinary and Twenty Extraordinary Directors, a Treasurer, an Honorary and an Acting Secretary, an Auditor, and other Officers.

The Supplementary Charter of 1856 provides for the appointment of a Council on Education, consisting of Sixteen Members—Nine nominated by the Charter and Seven elected by the Society;

## STATEMENT OF PRIVILEGES OF MEMBERS.

### MEMBERS OF THE SOCIETY ARE ENTITLED—

1. *To receive a free copy of the 'Transactions' annually.*
2. *To apply for District Premiums that may be offered, and for Long Service Awards for Agricultural Employees.*
3. *To report Ploughing Matches for Medals that may be offered.*
4. *To Free Admission to the Shows of the Society.*
5. *To exhibit Live Stock and Implements at reduced rates.*

Firms are not admitted as Members ; but if one partner of a firm becomes a Member the firm is allowed to exhibit at Members' rates.

6. *To have Fertilisers and Feeding-Stuffs, &c., analysed at reduced fees.*
7. *To obtain Reports on the Animal Enemies of Crop Plants and Live Stock (including Poultry).*
8. *To attend and vote at General Meetings of the Society.*
9. *To vote for the Election of Directors.*  
*&c., &c.*

### ANALYSES OF FERTILISERS AND FEEDING-STUFFS, &c.

The Scale of Fees in respect of Analyses made by the Society's Chemist for Members of the Society will be found under "Chemical Department."

Valuations of manures, according to the Society's scale of units, will be supplied on application being made.

*For further particulars, see under Chemical Department.*

*Chemist.*—Mr J. F. TOCHER, D.Sc., F.I.C., Crown Mansions, 41½ Union Street, Aberdeen.

### REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Entomologist is prepared to send to any Member of the Society a Report on damage to or diseases of plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals).

*For further particulars, see under Entomological Department.*

*Entomologist.*—Mr A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh.

## TERMS OF MEMBERSHIP, &c.

The influence and usefulness of the Society depend mainly upon its strength in membership. The Members, through the Directors whom they elect, have the practical control of the affairs of the Society. The stronger the body of Members, the greater will be the usefulness of the Society. It will therefore be to both their own and the public advantage if all who are interested in agriculture, and who are not already enrolled, should at once become Members of the Society.

### ELECTION OF MEMBERS.

Candidates for admission to the Society must be proposed by a Member, and are elected at the half-yearly General Meetings in January and June. It is not necessary that the proposer should attend the Meeting.

### RATES OF SUBSCRIPTION.

#### HIGHER SUBSCRIPTION.

The ordinary annual subscription is £1, 3s. 6d., and the ordinary subscription for life-membership is £12, 12s.; or after ten annual payments have been made, £7, 7s.

#### LOWER SUBSCRIPTION.

Proprietors farming the whole of their own lands, whose rental on the Valuation Roll does not exceed £500 per annum, and all Tenant-Farmers, Secretaries or Treasurers of Local Agricultural Associations, Factors resident on Estates, Land Stewards, Foresters, Agricultural Implement Makers, Grain, Seed and Manure Merchants, Agricultural Auctioneers, Catle Dealers and Veterinary Surgeons, none of them being also owners of land to an extent exceeding £500 per annum, and such other persons as, in respect of their official or other connection with agriculture, the Board of Directors may consider eligible, are admitted on a subscription of 10s. annually, which may be redeemed by one payment of £7, 7s., and after eight annual payments of 10s. have been made, a Life Subscription may be purchased for £5, 5s., and after twelve such payments, for £3, 3s.

*It must be stated, on behalf of Candidates claiming to be admitted at the Lower Rate of Subscription (10s.), under which of the above designations they are entitled to be admitted at the Lower Rate.*

---

Subscriptions are payable on election, and afterwards annually in January.

According to the Charter, a Member who shall not have objected to his election, on the same being intimated to him by the Secretary, cannot retire until he has paid, in annual subscriptions or otherwise, an amount equivalent to a life composition.

Members are requested to send to the Secretary the names and addresses of Candidates proposed for admission to the Society, at the same time stating whether the Candidates should be admitted at the £1, 3s. 6d. or 10s. rate.

# OFFICERS AND DIRECTORS FOR 1935-1936.

## President.

THE DUKE OF BUCCLEUCH AND QUEENSBERRY, G.C.V.O., Eildon Hall,  
St Boswells.

## Vice-Presidents.

THE EARL OF HADDINGTON, Mellerstain, Gordon.  
Major C. H. SCOTT PLUMMER of Sunderland Hall, Galashiels.  
Colonel A. R. TROTTER, M.V.O., D.S.O., of Charterhall, Duns.  
Captain R. J. THOMSON of Kaimes, West Linton.

Year of  
Election.

## Ordinary Directors.

- |      |   |   |
|------|---|---|
|      | { | Captain THOMAS ELLIOT, Thirlestane, Lauder.                             |
|      | { | T. G. WILSON, Carbeth Home Farm, Balfour Station.                       |
|      | { | W. P. GILMOUR, Balmangan, Kirkcudbright.                                |
| 1932 | { | PHIPPS O. TURNBULL, Bowmont, Dunbar.                                    |
|      | { | ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness.                   |
|      | { | GAVIN RALSTON, Glamis House, Glamis.                                    |
|      | { | GEORGE BUCHANAN, Hunterhill Farm, Paisley.                              |
|      | { | JAMES DURNO, Crichtie, Inverurie.                                       |
|      | { | JOHN W. PRENTICE, Craigrie Farm, Clackmannan.                           |
|      | { | JAMES WYLLIE, Tinwald Downs, Dumfries.                                  |
|      | { | Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh.              |
|      | { | WILLIAM FRASER, Knockomie, Forres.                                      |
| 1933 | { | THOMAS CLARK, Muirtons, Perth.  |
|      | { | LORD ROWALLAN, Rowallan, Kilmarnock.                                    |
|      | { | GEORGE GRANT of Glenfarclas, Blacksboat.                                |
|      | { | The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden,<br>Hawick.     |
|      | { | CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.                 |
|      | { | Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.            |
|      | { | Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House,<br>Conon Bridge. |
| 1934 | { | JAMES PATON, Kirkness, Glencaig.  |
|      | { | ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.              |
|      | { | Colonel ROBERT W. WALKER, Culter Lodge, Milltimber, Aberdeen-<br>shire. |
|      | { | THOMAS TEMPLETON, Sandyknowe, Kelso.                                    |
|      | { | JAMES R. LUMSDEN of Arden, Dumbartonshire.                              |
|      | { | G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.                          |
|      | { | JAMES P. BROWN, Dipple, Fochabers.                                      |
|      | { | WILLIAM MEIKLEM, Bennoch Park, Kirkcaldy.                               |
| 1935 | { | A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.          |
|      | { | JOHN P. SLEIGH of St John's Wells, Fyvie.                               |
|      | { | Major ROBERT W. SHARPE of The Park, Earlston.                           |
|      | { | T. MERCER SHARP, Bardrill, Blackford.                                   |
|      | { | JAMES WITHER, Awhirk, Stranraer.  |

Year of  
Election.

### Extraordinary Directors.

1934	JAMES KILPATRICK, Craigie Mains, Kilmarnock.
	J. P. ROSS-TAYLOR, Mungoswalls, Duns.
	J. E. KERR of Harviestoun, Dollar.
1935	ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.
	JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.
	JAMES M'LAREN, Cornton, Bridge of Allan.
	JOHN HEWETSON, Baltersan, Newton-Stewart.
	IAN M. CAMPBELL, Bal Blair, Invershin.
	ALEXANDER FORBES, Rettie, Banff.
	.....

### Share Division Directors.

1935	J. HASTIE BRYDON, Haddon, Kelso.
	Provost F. R. N. CURLE, Melrose.
	ANDREW D. ELLIOT of Kettelshiel, Greenlaw.
	THOMAS ELLIOT, Kirrdean, Newcastleton.
	HUGH H. FLEMING, Howford, Innerleithen.
	JAMES MITCHELL, Henderland, Selkirk.
	R. A. Robertson, Yetholm Mains, Kelso.
	T. W. ROBSON SCOTT, Lanton Tower, Jedburgh.
	Major S. STRANG STEEL of Philiphaugh, Selkirk.
	JAMES B. STEWART, Faughhill, St Boswells.

### Chief Officials, &c.

THE EARL OF HOME, K.T., The Hirsel, Coldstream, *Treasurer*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, *Honorary Secretary*.  
 JOHN STIRTON, 8 Eglinton Crescent, Edinburgh, *Secretary*.  
 J. G. YARDLEY, *Chief Clerk*.  
 JOHN WATT, *Second Clerk*.  
 GEORGE JAMES GREGOR, C.A., 8 York Place, Edinburgh, *Auditor*.  
 J. F. TOCHER, D.Sc., F.I.C., 41½ Union Street, Aberdeen, *Chemist*.  
 Professor R. STANFIELD, A.R.S.M., M.Inst.C.E., F.R.S.E., 24 Mayfield Gardens, Edinburgh, *Consulting Engineer*.  
 HENRY RAESIDE, 8 Eglinton Crescent, Edinburgh, *Master of Works*.  
 A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh, *Consulting Entomologist*.  
 The Very Rev. CHARLES L. WARR, D.D., 63 Northumberland Street, Edinburgh, *Chaplain*.  
 TODS, MURRAY, & JAMIESON, W.S., 66 Queen Street, Edinburgh, *Law Agents*.  
 WILLIAM BLACKWOOD & SONS LTD., 45 George Street, Edinburgh, *Publishers*.  
 HAMILTON & INCHES, Princes Street, Edinburgh, *Silversmiths*.  
 ALEXANDER KIRKWOOD & SON, 9 St James' Square, Edinburgh, *Medallists*.  
 JOHN MENZIES & CO. LTD., 6 Castle Street, Edinburgh, *Advertising Agents*.  
 JOHN REID, 55 Blenheim Place, Aberdeen, *Showyard Erector*.  
 J. P. LAUDER, *Officer and Caretaker*.

### Chairman of Board of Directors.

ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.



### Chairmen of Committee.

1. *Argyll Naval Fund* . . . MACLACHLAN OF MACLACHLAN, Castle Lachlan, Strathlachlan.
2. *Finance, Chambers, and Law* The EARL OF HOME, K.T., The Hirsel, Coldstream.
3. *Publications* . . . Colonel F. J. CARRUTHERS of Dormont, Lockerbie.
4. *Shows* . . . Major ROBERT W. SHARPE of The Park, Earlston.
5. *Implements and Machinery* . PHIPPS O. TURNBULL, Bowmont, Dunbar.
6. *Science* . . . Major ROBERT W. SHARPE of The Park, Earlston.
7. *General Purposes* . . . ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.
8. *Education* . . . Colonel F. J. CARRUTHERS of Dormont, Lockerbie.
9. *Forestry* . . . Sir HUGH SHAW-STEWART, Bt., K.C.B., Ardgowan, Inverkip.
10. *Office-bearers* . . . ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.

## COMMITTEES FOR 1935-1936.

### 1. ARGYLL NAVAL FUND.

MACLACHLAN OF MACLACHLAN, Castle Lachlan, Strathlachlan, *Convener*.  
The EARL OF ELGIN and KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.

Sir JOHN GILMOUR, Bt., P.C., D.S.O., M.P., of Montrave, Leven.

J. E. KERR of Harviestoun, Dollar.

JAMES R. LUMSDEN of Arden, Dumbartonshire.

Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House, Conan Bridge.

JAMES M'LAREN, Cornton, Bridge of Allan.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

Sir HUGH SHAW-STEWART, Bt., K.C.B., Ardgowan, Inverkip.

ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive,

*Chairman of Board of Directors, ex officio.*

The EARL OF HOME, K.T., The Hirsel, Coldstream, Treasurer, *ex officio*.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.

### 2. FINANCE, CHAMBERS, AND LAW.

The EARL OF HOME, K.T., The Hirsel, Coldstream, Treasurer, *Convener*.

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.

JAMES DURNO, Crichtie, Inverurie.

WILLIAM C. HUNTER of Arngask, Glenfarg.

J. E. KERR of Harviestoun, Dollar.

JAMES R. LUMSDEN of Arden, Dumbartonshire.

JAMES M'LAREN, Cornton, Bridge of Allan.

ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.

ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.

Major ROBERT W. SHARPE of The Park, Earlston.

PHIPPS O. TURNBULL, Bowmont, Dunbar.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.

GEORGE JAMES GREGOR, C.A., Auditor, *ex officio*.

### 3. PUBLICATIONS.

Colonel F. J. CARRUTHERS of Dormont, Lockiebie, Honorary Secretary,  
*Convener*

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.

JAMES P. BROWN, Dipple, Fochabers

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh

JAMES DURN, Crichton, Inverurie

ALEXANDER FORBES, Rettie, Banff

GEORGE GRANT of Glenfarclas, Blackboat

J. E. KERR of Harviestoun, Dollar

JAMES KILPATRICK, Craigie Mains, Kilmarnock

JAMES R. LUMSDEN of Arden, Dumbartonshire

JAMES M'LAREN, Cornton, Bridge of Allan

ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Moniaive

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire

Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh.

JAMES PATON, Kirkness, Glencraig

J. P. ROSS-TAYLOR, Mungoswalls, Duns

LORD ROWALLAN, Rowallan, Kilmarnock

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick

T. G. WILSON, Carbeth Home Farm, Balfron Station

The EARL OF HOME, K. T., The Husel, Coldestream, Treasurer, *ex officio*.

### 4. SHOWS.

Major ROBERT W. SHARPE of The Park, Earlstoun, *Convener*

J. E. KERR of Harviestoun, Dollar, *vice-Convener*

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh

JAMES P. BROWN, Dipple, Fochabers

J. HASTIE BRYDON, Haddon, Kelso

GEORGE BUCHANAN, Hunterhill Farm, Paisley

IAN M. CAMPBELL, Bal Blair, Inverishin

THOMAS CLARK, Muirton, Perth

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh

Provost F. R. N. CURRIE, Melrose

JAMES DURN, Crichton, Inverurie

ANDREW D. ELLIOT of Kettlewell, Glenelg

THOMAS ELLIOT, Kirrdean, Newcastleton

Captain THOMAS ELLIOT, Hurlstone, Faudry

HUGH H. FLEMING, Howford, Innerleithen

ALEXANDER FORBES, Rettie, Banff

WILLIAM FRASER, Knockonich, Forres

W. P. GILMOUR, Balmangan, Kirkcudbright

GEORGE GRANT of Glenfarclas, Blackboat

JOHN HEWETSON, Balterran, Newton-Stewart

JAMES KILPATRICK, Craigie Mains, Kilmarnock

JAMES R. LUMSDEN of Arden, Dumbartonshire

Sir HECTOR D. MACKENZIE of Garloch, Bt., Conan House, Conan Bridge.

JAMES M'LAREN, Cornton, Bridge of Allan

ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Moniaive

WILLIAM MEIKLE, Bennoch Park, Kirkcaldy

JAMES MITCHELL, Henderland, Selkirk

ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire

Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh

JAMES PATON, Kirkness, Glencraig

JOHN W. PRENTICE, Craigie Farm, Clackmannan

CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire

GAVIN RALSTON, Glamis House, Glamis.

R. A. ROBERTSON, Yetholm Mains, Kelso

J. P. ROSS-TAYLOR, Mungoswalls, Duns.  
 LORD ROWALLAN, Rowallan, Kilmarnock.  
 T. W. ROBSON SCOTT, Lanton Tower, Jedburgh.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 JOHN P. SLEIGH of St John's Wells, Fyvie.  
 A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.  
 Major S. STRANG STEEL of Philiphaugh, Selkirk.  
 JAMES B. STEWART, Faughhill, St Boswells.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 PHIPPS O. TURNBULL, Bowmont, Dunbar.  
 Colonel ROBERT W. WALKER, Culter Lodge, Milltimber, Aberdeenshire.  
 T. G. WILSON, Carbeth Home Farm, Balfour Station.  
 JAMES WITHER, Awhirk, Stranraer.  
 JAMES WYLLIE, Tinwald Downs, Dumfries.  
 The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.  
 Professor R. STANFIELD, A.R.S.M., &c., 24 Mayfield Gardens, Edinburgh,  
 Consulting Engineer, *ex officio*.

## 5. IMPLEMENTS AND MACHINERY.

PHIPPS O. TURNBULL, Bowmont, Dunbar, *Convener*.  
 J. P. ROSS-TAYLOR, Mungoswalls, Duns, *Vice-Convener*.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 JAMES P. BROWN, Dipple, Fochabers.  
 J. HASTIE BRYDON, Haddon, Kelso.  
 THOMAS CLARK, Muirtons, Perth.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 ANDREW D. ELLIOT of Kettleshiel, Greenlaw.  
 ALEXANDER FORBES, Rettie, Banff.  
 WILLIAM FRASER, Knockomie, Forres.  
 W. P. GILMOUR, Balmangan, Kirkcudbright.  
 JOHN HEWETSON, Baltersan, Newton-Stewart.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 JAMES PATON, Kirkness, Glencaig.  
 JOHN W. PRENTICE, Craigrie Farm, Clackmannan.  
 CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 Major ROBERT W. SHARPE of The Park, Earlston.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 JOHN P. SLEIGH of St John's Wells, Fyvie.  
 JAMES B. STEWART, Faughhill, St Boswells.  
 T. G. WILSON, Carbeth Home Farm, Balfour Station.  
 JAMES WITHER, Awhirk, Stranraer.  
 JAMES WYLLIE, Tinwald Downs, Dumfries.  
 ROBERT MACMILAN of Holm of Dalquharn, Woodlea, Moniaive,  
 Chairman of Board of Directors, *ex officio*.  
 The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.  
 Professor R. STANFIELD, A.R.S.M., &c., 24 Mayfield Gardens, Edinburgh,  
 Consulting Engineer, *ex officio*.

## 6. SCIENCE.

- Major ROBERT W. SHARPE of The Park, Earlston, *Convener*.  
 LORD ROWALLAN, Rowallan, Kilmarnock, *Vice-Convener*.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 IAN M. CAMPBELL, Bal Blair, Invershin.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 JAMES Durno, Crichtie, Inverurie.  
 Captain THOMAS ELLIOT, Thirlestane, Lauder.  
 ALEXANDER FORBES, Rettle, Banff.  
 WILLIAM FRASER, Knockomie, Forres.  
 W. P. GILMOUR, Balmangan, Kirkcudbright.  
 GEORGE GRANT of Glenfarclas, Blacksboat.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES R. LUMSDEN of Arden, Dumbartonshire.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive.  
 ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh.  
 JAMES PATON, Kirkness, Glencraig.  
 CHARLES W. RALSTON, Holmhull, Thornhill, Dumfriesshire.  
 GAVIN RALSTON, Glamis House, Glamis.  
 J. P. ROSS-TAYLOR, Mungoswalls, Duns.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.  
 Major S. STRANG STEEL of Philphead, Selkirk.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 PHIPPS O. TURNBULL, Bowmont, Dunbar.  
 T. G. WILSON, Carbeth Home Farm, Balfon Station.  
 The EARL of HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.  
 J. F. TOCHER, D.Sc., F.I.C., 41½ Union Street, Aberdeen, Chemist,  
*ex officio*.  
 A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of  
 Edinburgh, 10 George Square, Edinburgh, Consulting Entomologist,  
*ex officio*.

## 7. GENERAL PURPOSES.

- ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, Chair-  
 man of Board of Directors, *Convener*.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 THOMAS CLARK, Muirtons, Perth.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 Captain THOMAS ELLIOT, Thirlestane, Lauder.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 WILLIAM MEIKLEM, Bennochy Park, Kirkcaldy.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh.  
 JAMES PATON, Kirkness, Glencraig.  
 JOHN W. PRENTICE, Craigrie Farm, Clackmannan.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 Major ROBERT W. SHARPE of The Park, Earlston.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 PHIPPS O. TURNBULL, Bowmont, Dunbar.  
 The EARL of HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.

## 8. EDUCATION.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*Convener.*

JAMES M'LAREN, Cornton, Bridge of Allan.

ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive,  
Chairman of Board of Directors.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.

JOHN STIRTON, 8 Eglinton Crescent, Edinburgh, Secretary.

## 9. FORESTRY.

Sir HUGH SHAW-STEWART, Bt., K.C.B., Ardgowan, Inverkip, *Convener.*

The DUKE OF ATHOLL, K.T., G.C.V.O., C.B., D.S.O., M.V.O., Blair  
Castle, Blair Atholl.

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.

The EARL OF ELGIN and KINCARDINE, K.T., C.M.G., Broomhall, Dun-  
fermline.

Sir JOHN GILMOUR, Bt., P.C., D.S.O., M.P., of Montrave, Leven.

F. N. M. GOURLAY, Kirkland, Tynron, Thornhill, Dumfriesshire.

Sir JOHN H. MILNE HOME, Irvine House, Canonbie.

J. E. KERR of Harviestoun, Dollar.

JAMES R. LUMSDEN of Arden, Dumbartonshire.

A. D. MACDONALD, Lennie Mains, Cramond Bridge.

Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House, Conon Bridge.

MACLACHLAN of MACLACHLAN, Castle Lachlan, Strathlachlan.

J. T. M'LAREN, 7 Park Place, Stirling.

The EARL OF MANSFIELD, Scone Palace, Perth.

Sir HERBERT E. MAXWELL of Monreith, Bt., K.T., D.C.L., LL.D., F.R.S.,  
Whauphill.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

LORD POLWARTH, Humble House, Humble, East Lothian.

CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.

A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.

Major MARK SPROT of Riddell, Melrose.

The EARL OF STAIR, D.S.O., Lochinch, Castle-Kennedy.

Major S. STRANG STEEL of Philiphaugh, Selkirk.

Sir JOHN MAXWELL STIRLING-MAXWELL of Pollok, Bt., K.T., Pollok  
House, Pollokshaws.

ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, Chair-  
man of Board of Directors, *ex officio*.

The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.

## 10. OFFICE-BEARERS.

*Constitution* : (1) The four Ordinary Directors for the Division in which  
the Show for the year is to be held (with the exception of one retiring  
next year) ; (2) one Ordinary Director from each of the other Show  
Divisions ; and (3) the Chairman of the Board, Treasurer, and Hon.  
Secretary, *ex officio*.

*Stirling* . { JOHN W. PRENTICE, Craigie Farm, Clackmannan.  
JAMES R. LUMSDEN of Arden, Dumbartonshire.  
T. MERCER SHARP, Bardrill, Blackford.

*Dumfries* . JAMES WYLLIE, Tinwald Downs, Dumfries.

*Edinburgh* . Dr T. G. NASMYTH, Canaan Lodge, 43 Canaan Lane,  
Edinburgh.

*Inverness* . Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House,  
Conon Bridge.

- Perth* . JAMES PATON, Kirkness, Glencraig.  
*Glasgow* . LORD ROWALLAN, Rowallan, Kilmarnock.  
*Aberdeen* . GEORGE GRANT of Glenfarclas, Blacksboat.  
*Borders* . Major ROBERT W SHARPE of The Park, Ealston.

ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Moniaive,  
 Chairman of Board of Directors, *ex officio*

The EARL OF HOME, K.T, The Hirsel, Coldstream, Treasurer,  
*ex officio*.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary  
 Secretary, *ex officio*.

## REPRESENTATIVES ON OTHER BODIES.

### National Agricultural Examination Board and National Dairy Examination Board.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie.

JAMES M'LAREN, Cornton, Bridge of Allan.

ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Moniaive.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.

JOHN STIRTON, 8 Eglinton Crescent, Edinburgh.

### Edinburgh and East of Scotland College of Agriculture.

JOHN STIRTON, *Secretary*, Highland and Agricultural Society of Scotland,  
 8 Eglinton Crescent, Edinburgh.

### West of Scotland Agricultural College.

JAMES KILPATRICK, Craigie Mains, Kilmarnock.

### Aberdeen and North of Scotland College of Agriculture.

J. F. TOCHER, D Sc, F I C, 41½ Union Street, Aberdeen.

### Royal (Dick) Veterinary College.

Dr T. G NASMYTH, Canaan Lodge, 43 Canaan Lane, Edinburgh.

### Glasgow Veterinary College.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

### Scottish Milk Records Association.

GEORGE BUCHANAN, Hunterhill Farm, Paisley.

W. P. GILMOUR, Balmangan, Kirkcudbright.

ALEXANDER MUNRO of Leanach, Culloden Moor, Inverness.

### National Trust for Scotland.

The Hon. WALTER T. H SCOTT, Master of Polwarth, Harden, Hawick.

### Royal Scottish Agricultural Benevolent Institution.

ROBERT MACMILLAN of Holm of Dalquharn, Woodlea, Moniaive.

### Association for the Preservation of Rural Scotland.

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.

## SCOTTISH PLANT REGISTRATION STATION.

### Standing Committee of Management.

Major R. F. BREBNER, The Leuchold, Dalmeny  
 House, Edinburgh.

G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.

JAMES WITHER, Awhirk, Stianraer.

*Appointed for  
 5 years from 1st  
 January 1936.*

## MEETINGS.

**General Meetings.**—By the Charter the Society must hold two General Meetings each year, and, under ordinary circumstances, they are held in the months of January and June, for the election of Members and other business. Twenty a quorum.

By a resolution of the General Meeting held on 15th January 1879, a General Meeting of Members is held in the Showyard on the occasion of the Annual Show. In 1936 it will be held at Melrose, on the Wednesday of the Show, at an hour to be announced in the Programme of the Show.

With reference to motions at General Meetings, Bye-Law No. 19 provides that—"At General Meetings of the Society no motion or proposal (except of mere form or courtesy) shall be submitted or entertained for immediate decision unless notice thereof has been given two weeks previously to the Board of Directors, without prejudice, however, to the competency of a motion or proposal, of which due notice has not been given, being remitted to the Directors for consideration, and thereafter being disposed of at a future General Meeting."

**Directors' Meetings.**—The Board of Directors meet (except when otherwise arranged) on the first Wednesday of each month from November to June inclusive, at 1.30 P.M., and occasionally as business may require, on a requisition by three Directors to the Secretary, or on intimation by him. Seven a quorum.

**Committee Meetings.**—Meetings of the various Committees are held as required.

**Nomination of Directors.**—Meetings of Members, for the purpose of nominating Directors to represent the Show Divisions on the Board for the year 1937-1938, will be held at the places and on the days after-mentioned :—

DIVISION.		
1. <i>Edinburgh.</i>	Market Buildings, Gorgie, Edinburgh	Wed., 27th Jan. 1937, at 1.
2. <i>Glasgow.</i>	Central Station Hotel, Glasgow	Wed., 10th Feb. 1937, at 1.
3. <i>Stirling.</i>	Golden Lion Hotel, Stirling	Thur., 11th Feb. 1937, at 1.30.
4. <i>Perth.</i>	Salutation Hotel, Perth	Fri., 12th Feb. 1937, at 2.
(The Meeting will be held in 1938 and 1939 at Cupar; in 1940 at Perth.)		
5. <i>Borders.</i>	Railway Hotel, St Boswells	Thur., 18th Feb. 1937, at 2.
6. <i>Inverness.</i>	Station Hotel, Inverness	Tues., 23rd Feb. 1937, at 2.
7. <i>Aberdeen.</i>	Imperial Hotel, Aberdeen	Fri., 26th Feb. 1937, at 2.30.
8. <i>Dumfries.</i>	King's Arms Hotel, Dumfries	Wed., 10th Mar. 1937, at 2.

The nomination of a Proprietor or other Member paying the higher subscription must be made in the 1st, 2nd, 4th and 5th Divisions; and the nomination of a Tenant-Farmer or other Member paying the lower subscription in the 3rd, 6th, 7th and 8th Divisions.

Retiring Directors are not eligible for re-election until after the lapse of at least one year.

## GENERAL SHOW.

The 105th Annual Show of Stock, Implements and Machinery, &c., will be held at Melrose on 23rd, 24th, 25th and 26th June 1936. For closing dates for Entries, Premiums offered, &c., see 'Regulations and Prize List' herein.

### EXAMINATIONS.

**Agriculture.**—The Examination in 1936 for the National Diploma in Agriculture will be held at Leeds University on 15th April 1936 and following days. Applications close on 20th February 1936.

**Dairying.**—The Examination in 1936 (Scottish Centre) for the National Diploma in Dairying will be held at the Dairy School, Auchincruive, Ayr: *Written*—On 3rd, 4th and 5th September 1936; *Oral and Practical*—On 7th September 1936 and following days. Applications close on 1st August 1936.

**Forestry.**—The Final Examination for the Society's First and Second-Class Certificates in Forestry was held in 1935.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of the Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

All communications in connection with Examinations in Forestry should now be addressed to the Joint-Secretaries, Royal Scottish Forestry Society, 8 Rutland Square, Edinburgh 1.



## NATIONAL DIPLOMA IN AGRICULTURE

By a Supplementary Charter under the Great Seal, granted in 1856, the Society is empowered to grant Diplomas.

From 1858 to 1899 the Society held an annual Examination for Certificate and Diploma in Agriculture. In 1872 the Free Life Membership of the Society was granted to winners of the Diploma. In 1884 permission was given to holders of the Diploma to append the letters F.H.A.S. to their names.

In 1898 it was resolved by the Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland to discontinue the independent Examinations in Agriculture held by the two Societies, and to institute in their stead a Joint-Examination for a NATIONAL DIPLOMA IN AGRICULTURE (N.D.A.) This Examination is now conducted under the management of "The National Agricultural Examination Board" appointed by the two Societies.

## REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF AGRICULTURE

1. The Societies may hold conjointly, under the management of the National Agricultural Examination Board appointed by them, an Annual Examination in the Science and Practice of Agriculture, at a convenient centre.

2. Candidates who pass the Examination will receive the National Diploma in Agriculture—the Diploma to be distinguished shortly by the letters "N.D.A."

3. The Examination will be conducted by means of written papers and oral examinations.

4. In order to be eligible to sit for the Board's Examination in Agriculture, a candidate must—

(a) Present a certificate from a recognised Agricultural College that his attainments in the subjects of *General Botany, Geology, General Chemistry, Physics, and Mechanics*, as attested by class and other examinations, are, in the opinion of the authorities of the College, such as to justify his admission to the Board's Examination; or

(b) Produce evidence that he has passed the 1st B.Sc. or the Intermediate Examination in Science of a British University; or

(c) Present a School Certificate awarded by a British University Examination Board, and produce evidence that he has continued his study of science for at least a year and has obtained a certificate in Physics, Chemistry and Botany at the Higher Certificate Examination of a British University Examination Board.

(d) Present a Leaving Certificate in Science (including Chemistry and Botany) of the Scottish Education Department.

5. In the case of students who satisfy the Board that they have not had the facilities for obtaining the foregoing certificates, the Board will be prepared to consider evidence of equivalent attainment. [Applications under this rule must be lodged *three months* before the date of the annual examination.]

6. *Before sitting for the PRACTICAL AGRICULTURE and FARM MACHINERY AND IMPLEMENTS papers, all candidates must produce evidence of possessing a practical knowledge of Agriculture obtained by residence on a farm in the British Isles for a period or periods (not more than two) covering a complete year of farming operations.*

7. Candidates will have the option of taking the whole of the following nine papers at one time, or of sitting for a group of any three, four, or five in the first year and the remaining subjects (at one examination) within the next two years :—

SUBJECT.	Maximum Marks.	Pass Marks.
1. Practical Agriculture (First Paper) . . .	400	240
2. Practical Agriculture (Second Paper) . . .	400	240
3. Farm Machinery and Implements . . .	300	150
4. Land Surveying and Farm Buildings . . .	100	50
5. Agricultural Chemistry . . .	200	100
6. Agricultural Botany . . .	200	100
7. Agricultural Book-keeping . . .	200	100
8. Agricultural Zoology . . .	100	50
9. Veterinary Science and Hygiene . . .	200	100
	<hr/> 2100	<hr/> 1130

NOTE.—Candidates taking the Examination in two groups of subjects are recommended to take Agricultural Chemistry and Agricultural Botany in the first group.

8. A candidate who obtains not less than three-fourths (1575) of the aggregate maximum marks (2100) in the entire Examination will receive the Diploma with Honours, provided that he obtains not less than three-fourths (600) of the maximum marks (800) in the two Practical Agriculture papers.

9. Candidates electing to take the entire Examination at one time and failing in not more than three subjects may appear for these subjects in the following year. Failure in more than three subjects will be regarded as failure in the whole Examination.

10. In the case of candidates electing to take the Examination in two groups—

(a) A candidate appearing for a group of *three* subjects and failing in a single subject may, *in the case of a first group*, appear for that subject along with the second group, or, *in the case of a second group*, in the following year. Failure in more than one subject will be regarded as failure in the group.

(b) A candidate appearing for a group of *four* or more subjects and failing in not more than two subjects may, *in the case of a first group*, appear for these subjects along with the second group, or, *in the case of a second group*, in the following year. Failure in more than two subjects will be regarded as failure in the group.

11. Non-returnable fees must be paid by candidates as follows:—

Entire Examination . . .	Six guineas.
Group of Subjects . . .	Three guineas.
Reappearance for any Subjects .	10/6 per Subject.

12. The Board reserve the right to postpone, abandon, or in any way, or at any time, modify an Examination, and also to decline at any stage to admit any particular candidate to the Examination.

The Examination will take place at Leeds University on WEDNESDAY, 15th APRIL 1936, and following days.

Forms of application for permission to sit at the Examination may be obtained from "The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C. 1," or from "The Secretary, Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12," and must be returned duly filled up not later than THURSDAY, 20th FEBRUARY 1936, when the Entries will close.

## SYLLABUS OF SUBJECTS OF EXAMINATION

### PRACTICAL AGRICULTURE.

#### 1.—FIRST PAPER.

1. *British Farming*.—Arable, stock-raising, dairying—Approximate areas covered by the different systems—Typical examples of each—Area in Great Britain under chief crops—Numbers of live stock—The recent history of agriculture—Short summary of agricultural returns.

2. *Climate*.—The effect of climate on farming practice—Rainfall—Temperature—Prevailing winds—Weather forecasts.

3. *Soils*.—The influence of geological formations on the systems of farming—Classification of soils—Character and composition—Suitability for cultivation. Reclamation—Drainage—Irrigation—Warping—Application of lime and marl—Bare fallows—Tillage—Subsoiling—Deep and thorough cultivation.

4. *Manures*.—The manures of the farm—The treatment of farm-yard manure—The disposal of liquid manure and sewage—General manures—Special manures—Field trials of manures—The application of manures—Period of application and amounts used per acre—Unexhausted value of manures and feeding-stuffs.

5. *Crops*.—Wheat, barley, oats, rye, beans, peas, potatoes, turnips, swedes, mangolds, sugar beet, forage plants, hops, and other crops—Their adaptation to different soils and climates—Varieties—Selection of seed—Judging seeds—Cultivation, weeds and parasitic plants, best methods of prevention and eradication—Harvesting. Storing—Cost of production—Improvement of crops by selection and hybridising—Field trials—Methods which the farmer may adopt—Selection to resist disease—The principles of rotations—Rotations suitable for different soils and climates—Rotations and the maintenance of fertility—Green manuring—Leguminous crops in rotation—Catch crops—The advantages and disadvantages of rotations—Specialised farming—Management of Orchards.

## 2.—SECOND PAPER.

6. *Live Stock*.—The different breeds of British live stock—Their origin, characteristics, and comparative merits—Suitability for different districts—Breeding—General principles—Selection—Mating—Crossing—Rearing and general management—Breeding and rearing of horses, cattle, sheep, pigs, and poultry. Rearing colts and raising store stock—The foods of the farm—Their composition and suitability for different classes of stock—Purchased foods—Composition and special value—Rations for different kinds and ages of stock—Cost of producing beef, mutton, pork, and milk—Cost of feeding farm horses.

7. *The disposal of Crops, Produce, and Stock*.—Marketing grain and other crops—Sale of stock—Live weight—Dead weight.

8. *Milk*.—The production and treatment of milk—The manufacture of cheese, butter, &c.—The utilisation of by-products.

9. *Farming Capital*.—Calculations of the stocking and working of arable, stock, and dairy farms—Farm valuations—Rent and taxes.

10. *Labour*.—Organisation of labour—piece-work, time-work—labour costings.

11. *Renting a Farm*.—Indications of condition, productive power, and stock-carrying capacity—Leases—Conditions of occupancy.

*N.B.—It is essential that a candidate know his subject practically, and that he satisfy the Examiner of his familiarity with farm work and management.*

## 3.—FARM MACHINERY AND IMPLEMENTS.

1. *Power*.—The principle of action, construction, method of working, also care and management of steam engines and boilers, gas, oil and petrol engines and agricultural tractors. Cost and working expenses in connection with the above. Estimation of the brake horse-power of engines. Power derived from water. Measure-

ment of the quantity of water flowing in a stream. General arrangement of water-power plants. Water-wheels. Turbines. Pumps—principle of action and construction. Flow of water through pipes. Hydraulic ram. Windmills.

2. *Agricultural Implements and Machinery.*—The mode of action and the general principles involved in the construction and working of farm implements and machinery. Arrangement of machinery with respect to the power plant. Pulleys and belting. Shafting and bearings. Lubrication. Lifting appliances. Strength and care of chains. Concrete and its use in the construction of simple foundations for engines and machines.

3. *Implements of Cultivation.*—Ploughs—Cultivators—Grubbers—Harrows—Drills. Manure Distributors. Seeding and planting implements.

4. *Implements of Harvesting.*—Mowing and Reaping machines—Rakes—Teddies—Elevators—Potato raisers.

5. *Implements of Transit.*—Carts, waggons, rick lifters, tractors.

6. *Threshing and Food-preparing Machinery.*—Threshing machines, stationary and portable—Screen Winnowers—Hummelers, Chaff cutters—Pulpers—Cake breakers.

7. *Dairy Appliances.*—Milking machines—Cream separators—Churns and other butter-working appliances—Milk delivery cans—Cheese-making utensils—Vats and presses.

*N.B.—Candidates are expected to have had some experience with agricultural machinery and implements under actual working conditions, and to be capable of illustrating their answers, when necessary, by intelligible sketches or diagrams.*

#### 4.—LAND SURVEYING AND FARM BUILDINGS.

1. The use and adjustment of instruments employed in Surveying and Levelling other than the Theodolite.

2. Land surveying by chain, Plotting from field book, and determination of areas surveyed. The simpler "field problems."

3. Levelling and plotting from field book.

4. A knowledge of the various classes of maps published by the Ordnance Survey Department and their Scales.

5. *Roads and Fences.*—The construction and maintenance of farm roads, fences, and ditches.

6. *Land Drainage.*—Methods of draining; mole and pipe drains; cost of construction and maintenance.

7. *Buildings.*—Buildings required on different classes of farms—Economical arrangement of farm buildings—Materials—Construction—Ventilation—Drainage—Water supply—Dimensions of dairy, stables, cowsheds, yard, courts, and piggeries—Accommodation for power—Implement, machinery, and cart sheds—Hay and grain sheds—Shelter sheds—Storage of manure.

*N.B.—Each candidate should have with him at the Examination a pair of compasses, scales of equal parts, including scales of one chain to the inch, 4 feet to the inch, 8 feet to the inch, and the scale fitting the Ordnance Map,  $\frac{1}{3000}$  or 25·344 inches to the mile, a small protractor, a set square, and a straight-edge about 18 inches in length.*

## 5.—AGRICULTURAL CHEMISTRY.

1. *The Atmosphere*.—Its composition and relations to plant and animal life.

2. *Water*.—Rain water—Soil water and drainage—Drinking water—Sewage and irrigation.

3. *The Soil*.—Origin, formation, and classification of soils—Sampling—Analysis—Composition of soils—The chemical and physical properties of soils—The water and air of the soil—Biological changes in the soil—The soil in relation to plant growth—Fertility—Causes of infertility—Improvement of soils.

4. *Manures*.—Theories of manuring—Classification of manures—Origin, nature, and characteristics of manures—Manufacture of manures—Composition, analysis, adulteration, and valuation of manures—Farmyard manure and other natural manures—Green-manuring—Liming, marling, claying—Artificial manures, their origin and manufacture—Fertilisers and Feeding Stuffs Act—Sampling of manures.

5. *Poisons, Antiseptics, and Preservatives*.—General chemical composition and character of insecticides, fungicides, antiseptics, and preservatives used on the farm.

6. *Plants and Crops*.—Constituents of plants—Assimilation and nutrition of plants—Sources of the nitrogen and other constituents of plants—Germination—Action of enzymes—Composition and manurial requirements of farm crops—Food products derived from crops—Manuring experiments.

7. *Animals*.—Composition of animal body—Animal nutrition—Digestion—Assimilation, metabolism, respiration, and excretion.

8. *Foods and Feeding*.—Constituents of foods—Origin, nature, and composition of chief feeding-stuffs—Sampling, analysis, and adulteration of foods—Nutritive value and digestibility of food—Functions of chief food constituents—Energy values—Vitamins—Relation of foods to the production of work, meat, milk, and manure—Manurial residues of foods.

9. *Dairy Chemistry*.—The composition of milk, cream, butter, cheese, &c.—Conditions which influence the composition of milk and milk products—Action of ferments and enzymes on milk and milk products—Milk-testing—Analysis and adulteration of dairy products.

*N.B.*—Candidates who are in possession of *Laboratory Notes* are required to bring them to the Oral Examination in this subject.

## 6.—AGRICULTURAL BOTANY.

In addition to a *general knowledge* of the morphology, histology, and physiology of plants, candidates will be expected to possess a *detailed knowledge* of the following subjects:—

The classification of plants of importance in agriculture as shown by a detailed study of the genera, species, and botanical varieties of the British Crop Plants and Weeds included in the following families:—

Ranunculaceæ.	Umbelliferae.	Chenopodiaceæ.
Cruciferae.	Compositæ.	Polygonaceæ.
Caryophyllaceæ.	Solanaceæ.	Liliaceæ.
Leguminosæ.	Scrophulariaceæ.	Gramineæ.
Rosaceæ.	Labiatae.	

British grasses of agricultural importance : recognition of, at any stage of growth. Habitats of important species. Constitution of the grass flora of good meadows and pastures. Composition of seed mixtures for temporary and permanent leys on various soils. The effects of artificial manures on the flora of grass land.

The weeds of arable and grass land. Poisonous and parasitic weeds. Methods of distribution by seed and vegetatively : of eradication. Weeds as soil indicators. Recognition of the seeds of the common weeds, particularly those characteristically found in clover, grass, &c., seed.

The chief varieties of wheat, barley, oats, clovers, roots, and other farm crops : their suitability for various climatic and soil conditions. The identification of the more important types of cereals by means of their grain characters. Characteristics of good and bad samples of cereals.

Identification of materials used in feeding cakes and meals.

Plant-breeding. Principles of heredity in plants. Pure lines. Fluctuating variability. Selection.

Disease in plants. Diseases due to the effects of parasitic fungi. Resistance to disease : conditions affecting. Fungoid diseases scheduled from time to time by the Ministry of Agriculture and Fisheries.

Yeasts and fermentation.

The general outlines of bacteriology : nitrogen fixation, nitrification, and denitrification. Putrefaction and the bacteriology of milk, butter, and cheese.

N.B.—*Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.*

## 7.—AGRICULTURAL BOOK-KEEPING.

1. Advantages of book-keeping to the farmer. Difficulties and how they can be overcome. Objects of book-keeping.

2. General principles of book-keeping. Double-entry system. Description and use of various books. Ledger, journal, cash-book, petty cash-book, day-books, &c. Entering transactions ; posting ; trial balance ; closing the accounts. Single-entry system.

3. Special ledger accounts : Interest, depreciation, rent and rates, improvements, private and household expenses, profit and loss and capital ; partnership accounts.

4. Bank business. Opening a bank account. Use of cheques. Deposits and overdrafts.

5. General office work ; correspondence, order notes, invoices, rendering accounts, receipts, &c. Filing systems.

6. Farm valuations for book-keeping purposes. Dates for stock-taking and principles of valuation. The farm balance-sheet.

7. Systems of farm book-keeping. Conditions that determine the most suitable system. Advantages and drawbacks of each system.

8. Accounts for the owner-occupier. Treatment of rent. Incidence of rates and tithe in England and Scotland, and their treatment as between farm and estate accounts. Improvements and upkeep and the general principles relating to maintenance claims.

9. Cost accounting. General principles and methods. Advantages, objects, difficulties.

10. Interpretation of results from ordinary and from cost accounts. Precautions necessary. Use of accounts as a guide to efficient management.

11. Income Tax. How the farmer is assessed. Preparation of Income Tax return. Treatment of Income Tax in accounts.

### 8.—AGRICULTURAL ZOOLOGY.

The Examination is designed to test practical knowledge, and therefore Candidates will be expected to recognise the animals of agricultural importance referred to in the Syllabus.

#### GENERAL.

A general knowledge of the characteristics of living animals and how they differ from plants.

One-celled animals, *e.g.*, Amoeba, and many-celled animals.

General outline of the classification of animals and the characters on which it is based.

Organic Evolution. Theories of Heredity.

#### SPECIAL.

I. *Invertebrates*.—A. The Worm Parasites of Stock. Flat and Round Worms. Structure and Life History, for example, of Liver-fluke, Tapeworm, Ascaris. The mode of life and life history of the chief worm enemies of the domesticated animals. Preventive and remedial measures.

B. The Arachnid enemies of Stock: Mange or Scab Mites, Demodex Mites, Ticks. External structure and life history. Control measures.

C. The Insect enemies of Stock: (a) External parasites, *e.g.*, gadflies, warble flies, blue-bottles, green-bottles, stable fly, ked, lice. (b) Internal parasites, *e.g.*, bot and warble flies.

D. Insects injurious to Crops: Structure and classification of insects. Mode of life and life history of the chief insect pests of agricultural crops.\* Control, preventive and remedial measures—natural control; artificial control (Insecticides).

\* The chief pests are detailed in Pamphlets issued by the Ministry of Agriculture and Fisheries.

E. Other invertebrates of agricultural importance, *e.g.*, earth-worms, eelworms, slugs and snails, centipedes and millepedes, gall mites.

II. *Vertebrates*.—Birds: the commoner birds of farm importance, their recognition and an estimate of their work.

Mammals: Outstanding characters for recognition, and the economic importance of:—

1. Ungulata or Hoofed Mammals, *e.g.*, horse, pig, cattle, sheep, deer.
2. Rodentia or Gnawing Mammals, *e.g.*, hares, rabbits, rats, mice, voles, squirrels.
3. Insectivora, *e.g.*, mole, hedgehog, shrew.
4. Carnivora, *e.g.*, dog, fox, polecat, stoat, weasel, badger.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.



## 9.—VETERINARY SCIENCE AND HYGIENE.

1. Elementary anatomy and physiology of the horse, ox, sheep, and pig, and their relation to unsoundness and disease.

2. The general principles of breeding—including the physiology of reproduction, the laws of heredity, the periods of gestation, and the signs of pregnancy in the mare, cow, ewe, and sow.

3. Dentition as a means of determining the age of horses, cattle, sheep, and swine.

4. The management of farm stock in health and disease.

N.B.—*Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.*

## WINNERS OF DIPLOMA IN 1935.

*Diploma.*

HUGH ARBUTHNOTT, Glasgow University and West of Scotland Agricultural College.

LESLIE ALBERT ARSCOTT, Seale Hayne Agricultural College, Newton Abbot, Devon.

RONDESLEY WILKINS BAKER, University College of Wales, Aberystwyth.

CHARLES MILFRED BRAYSHAW, University of Leeds.

ANNA BURNS, Glasgow University and West of Scotland Agricultural College.

GORDON KADWELL CABBAN, South Eastern Agricultural College, Wye, Kent.

HARRY CAVENDISH CURSON, University of Leeds.

CONSTANTINE DAMOGLU, Seale Hayne Agricultural College, Newton Abbot, Devon.

MICHAEL JOHN DOUGLASS, South Eastern Agricultural College, Wye, Kent.

HUGH FERGUSON, Glasgow University and West of Scotland Agricultural College.

FREDERICK HENRY FOSTER, South Eastern Agricultural College, Wye, Kent.

GEOFFREY FISHER FRANCIS, University of Leeds.

MALCOLM GILLIES, West of Scotland Agricultural College, Glasgow.

EDWARD KENNETH GRIFFITHS, University College of Wales, Aberystwyth.

ARTHUR GUY, South Eastern Agricultural College, Wye, Kent.

WILLIAM HAIL, West of Scotland Agricultural College, Glasgow.

ERNEST GEORGE HARMER, Seale Hayne Agricultural College, Newton Abbot, Devon.

GEOFFREY PERCY JAMES HODDELL, Midland Agricultural College, Sutton Bonington, Loughborough.

CHARLES PATON HOWARD, West of Scotland Agricultural College, Glasgow.

JOHN FRASER HUNTER, West of Scotland Agricultural College, Glasgow.

- JOHN JONES, University of Leeds.  
 CHRISTOPHER KINGSLEY, East Anglian Institute of Agriculture,  
 Chelmsford.  
 WILLIAM KITCHENER LETHEREN, Seale Hayne Agricultural College,  
 Newton Abbot, Devon.  
 JOHN ELWYN LEWIS, University of Leeds.  
 DAVID ELJIOUS LIVINGSTONE, University of Reading.  
 WILLIE REES LLOYD-JONES, University College of Wales, Aberyst-  
 wyth.  
 WILLIAM LONGRIGG, Armstrong College, Newcastle-on-Tyne.  
 ARCHER LYNAM, Midland Agricultural College, Sutton Bonington,  
 Loughborough.  
 WILLIAM SMITH MACFARQUHAR, West of Scotland Agricultural  
 College, Glasgow.  
 JOHN MAIDMENT, University of Leeds.  
 WILLIAM MANGAN, 11a Cheapside, High Road, Wood Green, London.  
 GEORGE JOYCE MATTHEWS, Midland Agricultural College, Sutton  
 Bonington, Loughborough.  
 THOMAS NEIL, Armstrong College, Newcastle-on-Tyne.  
 DEREK GEORGE PALMER, Seale Hayne Agricultural College, Newton  
 Abbot, Devon.  
 GEORGE PATERSON, Glasgow University and West of Scotland  
 Agricultural College.  
 GRACE PICKEN, Glasgow University and West of Scotland Agricultural  
 College.  
 WALTER WEIR RITCHIE, Glasgow University and West of Scotland  
 Agricultural College.  
 JOHNSTON FRASER ROBB, West of Scotland Agricultural College,  
 Glasgow.  
 JOHN ROBERT EDWARD ROGERS, South Eastern Agricultural College,  
 Wye, Kent.  
 WILLIAM ALBERT SCRIVEN, Seale Hayne Agricultural College, Newton  
 Abbot, Devon.  
 ANDREW SHARP, East of Scotland College of Agriculture, Edinburgh.  
 ISAAC SIBSON, Armstrong College, Newcastle-on-Tyne.  
 ARCHIBALD BOYLE SMART, Glasgow University and West of Scotland  
 Agricultural College.  
 FREDERICK JOHN SOWERBY, Midland Agricultural College, Sutton  
 Bonington, Loughborough.  
 JOHN RUSSELL STUBBS, Harper Adams Agricultural College, Newport,  
 Shropshire.  
 FRANK SWANNACK, South Eastern Agricultural College, Wye, Kent.  
 THOMAS HERBERT THOROGOOD, 16 Catherine Street, Cambridge.  
 JOHN MARTIN WILLCOCK, Seale Hayne Agricultural College, Newton  
 Abbot, Devon.  
 JOHN M. WILSON, West of Scotland Agricultural College, Glasgow.

#### EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in AGRICULTURE, so far  
 as available, may be had on application. Price 6d. per set.

N.D.A. Papers available are those for the years 1930-1935 inclusive.

## NATIONAL DIPLOMA IN DAIRYING

This Examination, instituted in 1897, is conducted by "The National Dairy Examination Board," appointed jointly by the Royal Agricultural Society of England, the Highland and Agricultural Society of Scotland, and the British Dairy Farmers' Association.

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### REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF DAIRYING

1. The Societies may hold annually in England and in Scotland, under the management of the National Dairy Examination Board appointed by them, one or more examinations for the National Diploma in the Science and Practice of Dairying; the Diploma to be distinguished shortly by the letters 'N.D.D.'

2. The Examinations will be held on dates and at places from time to time appointed and duly announced.

3. Forms of Entry for the Examination in England may be obtained from 'The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1,' and must be returned to him duly filled up, with the entry fee, on or before Monday, 20th July 1936.

4. Forms of Entry for the Examination in Scotland may be obtained from 'The Secretary, Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12,' and must be returned to him duly filled up, with the entry fee, on or before Saturday, 1st August 1936.

5. Any candidate may enter for the Examination either in England or Scotland, but not in both, and a candidate who has once taken part in an Examination in England cannot enter for an Examination in Scotland, or *vice versa*. *An exception may be made in favour of a candidate reappearing under Regulation 11 (3) provided special application is made at the time of entry.*

6. As a preliminary to the acceptance of any application for permission to enter for the Examination, a candidate must produce:—

- (1) A certificate testifying that he or she has attended a Diploma Course in the subjects of the Examination covering *two*

*academic years* at an approved Dairy Training Institution and has satisfied the authorities of the Institution of his or her fitness for admission to the Examination. This period shall include six session months' instruction (consisting of not more than two periods) in practical dairy work.

- (2) Evidence that he or she has spent at least six months in not more than two periods on an approved Dairy farm and taken part in the work. This period must not run concurrently with the six months' practical training referred to in subsection 1.

*A Dairy Farm to be approved must have not fewer than fifteen cows kept in daily milking.*

7. A candidate who has already taken a Degree in Agriculture of a British University or a Diploma in Agriculture recognised by the National Dairy Examination Board, will be allowed to enter for the National Diploma in Dairying Examination after one year's training at an approved Dairy Training Institution, providing that such course includes at least six months' training in practical dairy work, and that he or she has worked for at least six months on an approved Dairy Farm.

8. In the Examination a candidate will be required to satisfy the Examiners by means of written papers, practical work, and  *viva voce*, that he or she has :—

- (1) A general knowledge of the Management of a Dairy Farm, including the rearing and feeding of Dairy Stock, the candidate being required to satisfy the Examiners that he or she had had a thorough training and practical experience in all the details of Dairy work as pursued on a farm.
- (2) A thorough acquaintance, both practical and scientific, with everything connected with the management of a Dairy, and the manufacture of Butter and Cheese.
- (3) A general knowledge of Dairy Factory Management, Dairy Hygiene, Dairy Engineering, and Dairy Book-keeping.
- (4) Practical skill in Dairying, to be tested by the making of Butter and Cheese.

NOTE.—A candidate must be prepared to make any one of the following varieties of Hard Pressed Cheese, the Examiner in Cheese-making having the option of saying during the Examination what variety a candidate shall make :—

AT THE ENGLISH CENTRE: Cheddar, Cheshire, or Derby.

AT THE SCOTTISH CENTRE: Cheddar, Dunlop, or Cheshire.

9. Candidates will have the option of :—

- (a) Taking the whole Examination at one time; or
- (b) Taking the Examination in two parts.

A candidate taking the Examination in two parts must take the following subjects at the first sitting: DAIRY FARMING, DAIRY HYGIENE, PRINCIPLES OF DAIRYING, DAIRY FACTORY MANAGEMENT

AND DAIRY ENGINEERING, PRACTICAL CHEESE-MAKING AND BUTTER-MAKING; the remaining three Papers, CHEMISTRY AND PHYSICS, DAIRY BACTERIOLOGY, and DAIRY BOOK-KEEPING, to be taken at the Examination in the following year.

10. The maximum marks obtainable and the marks required for a pass in each subject are as follow:—

WRITTEN EXAMINATION—	Max.	Pass.
Dairy Farming . . . . .	150	90
Dairy Hygiene . . . . .	100	60
Dairying—		
(a) Principles of Dairying . . . . .	150	90
(b) Dairy Factory Management and Dairy Engineering . . . . .	100	50
Chemistry—		
(a) General Chemistry and Physics. }	100	60
(b) Dairy Chemistry. }		
Dairy Bacteriology . . . . .	100	60
Dairy Book-keeping . . . . .	100	50
PRACTICAL EXAMINATION—		
Hard-pressed Cheese-making . . . . .	200	150
Blue-veined Cheese-making . . . . .	100	75
Soft Cheese-making . . . . .	100	75
Butter-making . . . . .	200	150
	<hr/> 1400	<hr/> 910

Honours will be awarded to candidates obtaining an aggregate of 80 per cent (1120) of the maximum marks (1400) in the Examination, provided that they also obtain at least 80 per cent (400) of the maximum marks (500) in the Dairy Farming, Hygiene, and Dairying papers.

11. A candidate taking the whole Examination at one time:—

- (1) who fails in any part of the practical examination shall fail in the whole examination.
- (2) who fails in four or more subjects of the written examination shall fail in the whole examination.
- (3) who, having passed in the practical examination, fails in not more than three subjects of the written examination may, at the discretion of the Board, appear for those subjects in the following year. The Board may in certain circumstances require evidence of further study in these subjects.

12. A candidate taking the Examination in two parts, and failing in a *single subject* in the first part of the Examination, may, at the discretion of the Board, appear for that subject along with the second part; or, in the case of a *single subject* of the second part, in the following year. The Board may in certain circumstances require evidence of further study in that subject.

Failure in more than one subject will be regarded as failure in that part of the Examination. Failure in any part of the Practical Examination will entail complete failure.

## 13. The entrance fees will be as follow:—

For the whole Examination taken at one time	£3	3	0
For the Examination taken in two parts:			
First part		3	3
Second part		1	1
For reappearance, 10s. 6d. each subject.			

14. The Board reserve the right to postpone, to abandon, or in any way or at any time to modify an Examination, and also to decline at any stage to admit any particular candidate to the Examination.

## DATES OF EXAMINATIONS.

**SCOTLAND.**—THURSDAY, 3rd September 1936, and following days, at the Dairy School, Auchincruive, Ayr. Last date for receiving applications, SATURDAY, 1st AUGUST 1936.

**ENGLAND.**—At the University and British Dairy Institute, Reading. **WRITTEN**—THURSDAY, FRIDAY, and SATURDAY, 3rd, 4th, and 5th September 1936. **ORAL AND PRACTICAL**—MONDAY, 14th September 1936, and following days. Last date for receiving applications, MONDAY, 20th JULY 1936.

## SYLLABUS OF SUBJECTS OF EXAMINATION.

*Answers to all Questions must be written in INK.*

## I.—DAIRY FARMING AND DAIRY HYGIENE.

## (a) DAIRY FARMING.

**SOILS AND CROPS.**—Types of Soils suitable for dairying. Rotations and systems of cropping. Cultivation, manuring and management of grain, root and forage crops used in dairying. Silage. Temporary and permanent pastures, haymaking.

**PLANT PHYSIOLOGY.**—Roots, shoots, flowers, fruit and seeds of agricultural plants.

**DAIRY CATTLE.**—Characteristics of different breeds. Relation of conformation and appearance to Milk Yield. Choice of dairy cattle in relation to climate and soil. The milk yields of the more important breeds, and suitability for the milk trade, cream, butter and cheese production.

The management of a Dairy Herd. Cattle breeding and grading up of dairy stock. Calf rearing and management of young stock.

Milk Recording. Systems, and utilisation of results. Details of official schemes.

**FOODS AND FEEDING.**—Summer and winter feeding of dairy cattle and young stock. Fodder crops and green forage. Roots. Ensilage. Concentrated foods, meals, cakes. Preparation of food. The effect of food on milk and its products.

**PIG KEEPING.**—Characteristics of the more important breeds. The breeding, rearing and fattening of pigs. Production of pork and bacon.

**FARM MANAGEMENT.**—Systems of dairy farming. The selection, stocking and equipment of typical farms. Organisation of the farm and disposal of produce.

**DAIRY ECONOMICS.**—The Dairy Industry of Great Britain and its relationship to Agriculture. The relative importance of the various products. The retail milk trade. Markets, Dairy organisation and co-operation. Modern developments in the Dairy industry. Sources of imported Dairy Produce.

#### (b) DAIRY HYGIENE.

**ANIMAL PHYSIOLOGY.**—General functions of the organs of the animal body. Breeding. Parturition. The structure of the udder and the process of milk secretion. Changes which food undergoes during digestion.

**VETERINARY SCIENCE.**—The more important diseases of dairy cattle and their treatment. The transmission and eradication of disease.

**MILK HYGIENE.**—Sanitary conditions. Suitability of water supply. Methods of milking and handling of milk. Regulations affecting milk production. Milk in relation to Public Health.

**FARM BUILDINGS.**—Situation, chief dimensions and construction of cow houses and dairy buildings. Housing for young stock and pigs. Air space and ventilation, drainage and water supply.

## II.—DAIRYING.

### (a) PRINCIPLES OF DAIRYING.

**MILK.**—Milking by hand and machinery. Importance of cleanliness. Cooling of milk. Prevention of contamination. Pasteurisation. Sterilisation. Keeping of milk. Milk testing and sampling. Use of Gerber and Babcock Testers. Interpretation of results. Legal standards. Legislation affecting milk production.

**CREAM.**—Separators and their management. Different systems of cream raising and ripening of cream. Changes during ripening. Natural and artificial ripening, and preparation and uses of starters. Preparation of cream for sale. Uses of preservatives. Clotted cream.

**BUTTER.**—Churns and butter-making appliances. Preparation of cream for churning. Washing and working butter. Butter milk. Packing and transmission of butter. Selection and keeping of butter. Salting. Use of preservatives. Characteristics of good butter and method of judging. Circumstances affecting the flavour, texture, colour and keeping qualities of butter. Potting butter for keeping. Causes of inferior butter.

**CHEESE.**—Principles of manufacture. Appliances for cheese-making. The making of the principal varieties of British, Colonial and Continental cheese from cream, whole milk and skim milk. Acidity of milk. Common tests for acidity. Uses of rennet and its substitutes. Whey. Ripening and storage of cheese. Packing and sale of cheese. Making of cream and other soft cheese. Defects in cheese and their causes. Judging cheese.

(b) **DAIRY FACTORY MANAGEMENT AND DAIRY ENGINEERING.**

**FACTORY PRACTICE.**—Milk depots and handling of factory milk. Systems of cooling and refrigeration. Pasteurisation. Factory butter and cheese-making. Milk Powders. Condensed milk. Frozen milk. Ice cream. Dried casein. Fermented milk. Lactose and whey-butter. Margarine manufacture. Equipment of milk depots, butter, cheese and dairy factories.

**FACTORY MANAGEMENT.**—Factory routine. Organisation of labour. Handling of milk on arrival at the factory. Methods of dealing with the milk. Milk contracts. Dairy factory legislation.

**DAIRY APPLIANCES AND MACHINERY.**—Appliances used in the production and handling of milk, butter and cheese. Care and management of engines and boilers, dairy factory machinery, refrigerating machinery.

**BUILDINGS.**—Situation, construction and drainage of creameries, milk depots and dairy factories

### III.—CHEMISTRY.

(a) **GENERAL CHEMISTRY AND PHYSICS.**

**CHEMISTRY.**—Elements, compounds and mixtures. Chemical symbols, formulæ and equations. Acids, bases, salts: their distinctive properties. Acidity and alkalinity; their quantitative estimation. The Atmosphere: its constituents and impurities; influence on dairying operations. Water: its constitution; pure and natural waters; impurities in water and whence derived. Importance of a good water supply in dairying. General knowledge of elementary chemistry. Oxygen; hydrogen; carbon; nitrogen; phosphorus and sulphur; common metals; common acids; compounds of potassium, sodium, ammonium, calcium.

Elementary organic chemistry; sugar, milk sugar, starch, alcohol, acetic acid, formaldehyde, butyric acid, lactic acid, glycerine, saponification of fats; albumen, casein, pepsin.

**PHYSICS.**—The different forms of matter; solid, liquid, gaseous. Specific gravity and instruments for determining it. Temperature and methods of measuring it. Expansion; thermometric scales. Influence of temperature in dairy operations. Atmospheric pressure and its measurement. Hygrometry. Heat and its measurement; specific heat. Latent heat. Conduction. Convection. Radiation. Solution. Filtration. Distillation. Simple machines, such as levers, pulleys and light weighing machines.



### (b) DAIRY CHEMISTRY.

**CHEMISTRY OF MILK.**—The nature, composition, properties and chemical constituents of milk. Microscopical appearances presented by milk. The influence of feeding. The changes which occur in the keeping of milk, and how produced. The natural and artificial souring of milk. Rennet, its nature and uses.

**MILK PRODUCTS.**—Physical and chemical changes involved in the making and keeping of butter and in the manufacture and ripening of cheese. Separated milk. Condensed milk. Fermented milk. Synthetic milk. The use of preservatives.

**DAIRY ANALYSIS.**—Analytical methods, their theory and practice. A general knowledge of the methods employed in the chemical analysis of milk, butter and cheese. Adulteration of milk, cream, butter and cheese, the ways in which adulteration is practised, the changes in composition thereby produced, and a general knowledge of the methods employed in detecting the same.

**CHEMISTRY OF FEEDING.**—The principal constituents of food materials and the functions they severally fulfil. The influence of food constituents on milk production. Assimilation and digestion. The manurial value of foods. Milk and milk products as foods.

*N.B.—Candidates are required to bring to the Oral Examination their Laboratory notebooks in sections (a) and (b) of this subject certified by their teachers as being the record of their Laboratory work carried out during the course.*

### IV.—DAIRY BACTERIOLOGY.

**GENERAL BACTERIOLOGY.**—Bacteria; their form, classification, growth and reproduction. The microscope and its use. Staining and microscopic examination of bacteria. Methods of isolation and cultivation. Preparation of culture media. Fermentations and chemical changes produced by bacteria. Enzymes and their action. Effects of heat, cold, sterilisation, pasteurisation, disinfectants and preservatives on bacteria and enzymes. Bacteriological examination of water supplies.

**BACTERIOLOGY OF MILK.**—The changes produced by bacteria in milk. Useful forms and their functions. Harmful forms and their effects. Coagulation, discoloration, taints, &c. Bacteriological and other standards in relation to the cleanliness of milk.

**MILK PRODUCTS.**—The bacteria concerned in the ripening of cream and butter-making. 'Starters,' their preparation and management. The ripening of hard, soft and blue-veined cheese. Bacteria injurious to milk products, including condensed and dried milk.

**DAIRY MYCOLOGY.**—Moulds and yeasts in dairy practice. Their form, classification, growth and relation to dairy products.

*N.B.—Candidates are required to bring to the Oral Examination in this subject their Laboratory notebooks certified by their teachers as being the record of their Laboratory work carried out during the course.*

## V.—DAIRY BOOK-KEEPING.

Reasons for keeping accounts on the farm and in the dairy factory.

General principles of double-entry book-keeping. Use of day-book, journal, ledger, cash-book, analysis cash-book, and petty-cash book. Preparation of profit and loss account, capital account and balance sheet. Adjustments necessary for the owner-occupier.

Valuations. Basis of valuations for accounting purposes on the farm and in the dairy factory. Dates for stocktaking.

Methods of accounting suitable for dairy farms and factories. Forms for milk-retailing, cheese-making, and butter-making.

Preparation of a cost account for milk production.

Interpretation and use of accounting results, with special reference to their practical application.

Opening a Bank account. Cheques, deposits, and overdrafts.

Assessment of the Farmer for Income Tax purposes.

## VI.—PRACTICAL SKILL IN DAIRY WORK.

Candidates must be prepared—(1) to produce before the Examination a satisfactory certificate of proficiency in the milking of cows, signed by a practical Dairy Farmer, and to satisfy the Examiners by a practical test, if so required; (2) to churn and make into Butter a measured quantity of Cream; and (3) to make one Cheese of each of the following varieties: (1) Hard-pressed, of not less than 30 lb. (see Note to Reg. 8 (4)); (2) Veined or blue-moulded, of not less than 10 lb.; and (3) also to make one or other of the following Soft Cheeses: Cambridge, Camembert, Coulommier, or Pont l'Évêque.

## WINNERS OF DIPLOMA IN 1935.

## SCOTTISH CENTRE.

*Diploma.*

GEORGE THOMSON CHALMERS, Skilmafilly Cottage, Auchnagatt, Aberdeenshire.

JOHN ASHBURY COLLIER, Hill Farm, Stafford.

ANNIE COOK, Claynod, Kilmorie, Arran.

HUGH FERGUSON, 8 Barochan Place, Campbeltown, Argyll.

GEOFFREY FISHER FRANCIS, 48 Huddersfield Road, Barnsley, Yorks.

CHRISTIAN JANE WEDDERBURN GALL, Home Farm, Kinnmonth, Mintlaw, Aberdeenshire.

MALCOLM GILLIES, Mission House, Bernera, Stornoway, Lewis.

WILLIAM HAIL, Station House, Stepps, Glasgow.

NANNIE MACNEE JOHNSTON, 2 Duke Street, Hawick.

CATHERINE WILSON KING, Bowfield Farm, Uplawmoor, Glasgow.

WILLIAM LONGRIGG, Howes Farm, Calthwaite, Penrith.

AUGUSTA MARGARET JANE MACKINNON, Borge House, Borge, Stornoway, Lewis.

CATHERINE MATHIESON, 6 Park Circus Place, Glasgow.

MARIA ANN MURRAY, Faugh Beeches, Heads Nook, Carlisle.

GEORGE PATERSON, Laigh Parks, Killearn, Stirlingshire.

GRACE PICKEN, Priorletham, St Andrews, Fife.

JOHNSTON FRASER ROBB, 46 Murdieston Street, Greenock.

RALPH SEGAL, 106 Tantallon Road, Shawlands, Glasgow.  
 ALEC G. SETON, 1 North Hill Court, Headingley, Leeds.  
 FORD GIBSON STURROCK, Crofthead House, Neilston, Renfrewshire.  
 FANNY E. A. SUTHERLAND, Lystina House, Lerwick, Shetland.  
 NICKLAS EUPHEMIA WILSON, Bellevue, Eddleston, Peebles.  
 ALICE WILSON GAULD WYLIE, Stockbridge, Dunblane.

#### ENGLISH CENTRE.

##### *Diploma.*

AGNES ENID ARCHER, Studley College, Warwickshire.  
 LESLIE ALBERT ARSCOTT, Seale Hayne Agricultural College, Newton Abbot, Devon.  
 GRENVILLE RAYMOND HUGH BISHOP, Midland Agricultural College, Sutton Bonington, Loughborough.  
 ETHEL ISABELLA RUTH CALDER, East Anglian Institute of Agriculture, Chelmsford.  
 ALBERT CROFT, Midland Agricultural College, Sutton Bonington, Loughborough.  
 BETTY CRICKSHANK, East Anglian Institute of Agriculture, Chelmsford.  
 FRANCES ROSEANNA MURIEL DAVIES, University College of Wales, Aberystwyth.  
 ROBERT MAXWELL DICKSON, Midland Agricultural College, Sutton Bonington, Loughborough.  
 MARION GOODFELLOW DOBSON, The University and British Dairy Institute, Reading.  
 JOHN DAVID GRIFFITHS, University College of Wales, Aberystwyth.  
 ANNIE HARRIES, University College of Wales, Aberystwyth.  
 EDWIN ROLAND WITHAM HENSON, East Anglian Institute of Agriculture, Chelmsford.  
 JOYCE AMELIA HOLDEN, Studley College, Warwickshire.  
 JOYCE HOLLAND, Midland Agricultural College, Sutton Bonington, Loughborough.  
 GWEN MORGAN HUGHES, University College of Wales, Aberystwyth.  
 MAGGIE MARY JONES, University College of Wales, Aberystwyth.  
 DOREEN KELLY, The University and British Dairy Institute, Reading.  
 MARJORIE MASSEY, Lancashire County Council Dairy School, Hutton, Preston.  
 ELIZABETH ANN MEREDITH, East Anglian Institute of Agriculture, Chelmsford.  
 DOROTHEA NANCE, Studley College, Warwickshire.  
 GEORGE HOWARD PROFFIT, Midland Agricultural College, Sutton Bonington, Loughborough.  
 BLODWIN ROBERTS, University College of Wales, Aberystwyth.  
 IORWERTH ROBERTS, University College of Wales, Aberystwyth.  
 JAMES MORRIS TREW, The University and British Dairy Institute, Reading.  
 JANE ANGHARAD TUDOR, University College of Wales, Aberystwyth.  
 JOYCE MURIEL WALKER, Lancashire County Council Dairy School, Hutton, Preston.

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#### EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in Dairying, so far as available, may be had on application. Price 6d. per set.

## CERTIFICATES IN FORESTRY

In 1870 the Society instituted an Examination in Forestry, and granted First and Second-Class Certificates respectively to such students as attained a certain standard of proficiency in the following subjects. Candidates were required to possess a thorough acquaintance with the theory and practice of Forestry, and a general knowledge of the following branches of study, so far as these applied to Forestry: (a) the elements of Forest Botany and Forest Zoology; (b) the elements of Meteorology and Geology; (c) Forest Engineering; and (d) Arithmetic and Book-keeping.

Holders of the First-Class Certificate were entitled to become free Life Members of the Society.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of the Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

The list of students who obtained the Highland and Agricultural Society's Certificates in Forestry prior to 1899 appears in the 'Transactions' for the year 1899. A further list of those obtaining Certificates between 1899 and 1935 inclusive appears in the 'Transactions' for the year 1935. The total number of Certificates granted since the commencement of the Examination in 1870 was, First-Class, 43; Second-Class, 38.

## VETERINARY CERTIFICATES AND MEDALS

The Society established a Veterinary Department in 1823, but by an arrangement made with the Royal College of Veterinary Surgeons, the Society's examination ceased in 1881. Holders of the Society's Veterinary Certificate are entitled to become members of the Royal College of Veterinary Surgeons on payment of certain fees, without being required to undergo any further examination. The number of students who passed for the Society's Certificate is 1183.

The Society gives annually a limited number of silver medals for Class competition to each of the two Veterinary Colleges in Scotland—the Royal (Dick) Veterinary College, Edinburgh, and the Glasgow Veterinary College, Glasgow.

## CHEMICAL DEPARTMENT

*Chemist to the Society*—J. F. TOCHER, D.Sc., F.I.C., Crown Mansions,  
41½ Union Street, Aberdeen.

The object of the Chemical Department is to promote the diffusion of a knowledge of Chemistry as applied to agriculture among the members of the Society, to carry out experiments for that purpose, to assist members who are engaged in making local experiments requiring the direction or services of a chemist, to direct members in regard to the use of manures and feeding-stuffs, to assist them to put the purchase of these substances under proper control, and in general to consider all matters coming under the Society's notice in connection with the Chemistry of Agriculture.

### MEMBERS' PRIVILEGES IN RESPECT TO ANALYSES.

The Directors are anxious to take any steps in their power to expose the vendors of inferior fertilisers and feeding-stuffs, and the members can give them assistance in this by supplying to the Chemist, when sending samples for analysis, information as to the guarantee, if any, on which the goods were sold, and also as to the price charged.

*These charges apply only to analyses made for agricultural purposes, and for the sole and private use of members of the Highland and Agricultural Society who are not engaged in the manufacture or sale of the substances analysed.*

Valuations of manures, according to the Society's scale of units, will be supplied if requested.

The Society will not be liable for payment of fees in respect of analyses for any member in excess of £5 for any one year, or £10 for any five consecutive years.

The undernoted fees are those payable by a member. These amounts represent only one-third of the total fee for any particular analysis, the other two-thirds being paid by the Society.

This scale does not apply to members whose subscriptions are in arrears.

### FERTILISERS AND FEEDING-STUFFS.

- |   |      |
|---|------|
| (1) The determination of one ingredient in a single sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . .  | 3/6  |
| (2) The determination of two ingredients in a single sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . . | 5/-  |
| (3) The complete analysis of a sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . .                       | 10/- |

*For example—*

*For one ingredient only.*

Linseed and other cakes, for oil <i>or</i> for albuminoids . . .	3/6
Feeding meals, ground cereals, for oil <i>or</i> for albuminoids . . .	
Bone meals, for nitrogen <i>or</i> for total phosphate . . .	
Compound manures, for nitrogen <i>or</i> for soluble phosphate <i>or</i> for insoluble phosphate <i>or</i> for potash . . .	
Superphosphate, for soluble phosphate <i>or</i> for insoluble phosphate . . .	
Ground mineral phosphate, for insoluble phosphate <i>or</i> for citric soluble phosphate . . .	
Slag phosphate, for insoluble phosphate <i>or</i> for citric soluble phosphate . . .	

*For two ingredients only.*

Any two ingredients of a manure or of a feeding-stuff . . .	5/-
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*For a complete analysis.*

For manures, the proportions of nitrogen (nitrogen included as nitrates or as ammonia compounds), soluble phosphate, insoluble phosphate, potash; For feeding-stuffs, the proportions of oil, albuminoids, carbohydrates, iodine, mineral matter, fibre and moisture . . .	10/-
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- |   |     |
|---|-----|
| (4) Ground Limestone, for carbonic acid and calcium, two determinations . . . | 5/- |
| (5) Ground Lime, for percentage of calcium oxide . . .                        | 3/6 |

#### AGRICULTURAL PRODUCTS.

- |   |      |
|---|------|
| (6) Turnips, sugar beet, for total sugar . . .  | 5/-  |
| (7) Turnips, sugar beet, for oil, albuminoids, sugar, mineral matter, fibre and moisture . . .                      | 10/- |
| (8) Grass, hay, ensilage, grain, &c., for oil, albuminoids, carbohydrates, mineral matter, fibre and moisture . . . | 10/- |
| (9) Grain, for carbohydrates and moisture . . .   | 5/-  |

#### MILK AND MILK PRODUCTS.

- |   |     |
|---|-----|
| (10) <i>Milk</i> , fresh, for butter fat only, by Gerber process . . .  | 1/- |
| (11) <i>Milk</i> , fresh, for butter fat, by Gerber, and solids not fat . . .   | 2/6 |
| (12) <i>Milk</i> , sour sample, for butter fat, and solids not fat. Soxhlet extraction and Government Laboratory method for sour sample . . . | 5/- |
| (13) <i>Milk</i> , for preservatives, borates, sulphur dioxide, hydrogen peroxide, formalin . . .   | 5/- |
| (14) <i>Butter</i> , for true butter fat and moisture (Reichert), for genuineness . . .   | 5/- |
| (15) <i>Butter</i> , for true butter fat (Reichert), moisture, foreign fat, preservatives . . .   | 7/6 |

## WATER AND LIQUID SUBSTANCES.

*Cases containing bottles for water samples and instructions for sampling are sent from the laboratory on application.*

- |  |      |
|--|------|
| (16) Supply of water at farm, for total solids, free ammonia, albuminoid ammonia, nitrites, nitrates, hardness, for fitness for domestic use or potability . . .   | 12/6 |
| (17) Supply of water at farm, for potability as above, and for proportions of mineral constituents, lead, copper, acidity pH value, action of water on lead (plumbo solvency), action of water on copper . . . | £1   |
| (18) Farm-yard manure, liquid manure, for nitrogen, potash, phosphates, and proportion of other mineral substances . . . . .   | £1   |

## MISCELLANEOUS.

- |   |         |
|---|---------|
| (19) Feeding oils and fats, for composition and quality . . .                           | 10/-    |
| (20) Search for proportion of arsenic in feeding-stuff . . .                            | 10/-    |
| (21) Search for proportion of lead in feeding-stuff . . .                               | 10/-    |
| (22) Search for arsenic or any one poison in feeding-stuff . . .                        | 10/-    |
| (23) Search for proportion of any one poison in viscera . . .                           | 10/-    |
| (24) Search for poisons in food or in viscera, and proportion of poison found . . . . . | £1 10/- |

*(Veterinary surgeons are not entitled to have searches made for poisons in food or viscera under the Society's scheme for clients who are not members of the Society.)*

- |  |      |
|--|------|
| (25) Proportion of arsenic in sheep dips or insecticides . . .   | 10/- |
| (26) Proportion of carbolic acid in sheep dips or insecticides . . .                                     | 5/-  |
| (27) Proportion of tar acids in sheep dips or insecticides . . .   | 10/- |
| (28) Insecticides, foot rot pastes and other agricultural remedies for live stock and farm produce . . . | £1   |

*Samples should be sent (carriage paid) to Dr J. F. TOCHER, Crown Mansions, 41½ Union Street, Aberdeen.*

## INSTRUCTIONS FOR SELECTING SAMPLES FOR ANALYSIS.

## MANURES.

Any method of sampling mutually agreed upon between buyer and seller may be adopted, but the following method is recommended as a very complete and satisfactory one: Four or more bags should be selected for sampling. Each bag is to be emptied out separately on a clean floor, worked through with the spade, and one spadeful taken out and set aside. The four or more spadefuls thus set aside are to be mixed together until a uniform mixture is obtained. Of this mixture one spadeful is to be taken, spread on paper, and still more thoroughly mixed, any lumps which it may contain being broken down with the hand. Of this mixture two samples of about half a pound each should be taken by the purchaser or his agent, in the presence of the seller or his agent or two witnesses (due notice having been given to the seller of the time and place of sampling), and these

samples should be taken as quickly as possible, and put into bottles or tin cases to prevent loss of moisture, and having been labelled, should be sealed by the samplers—one or more samples to be retained by the purchaser, and one to be sent to the Chemist for analysis.

#### FEEDING-STUFFS.

Samples of feeding-stuffs which are in the form of meal may be taken in a similar manner to that mentioned above.

Samples of cake should be taken by selecting four or more cakes from the bulk. These should be nudded to a size not larger than walnuts. The nudded cake should then be thoroughly mixed and samples of not less than one pound each taken from it. The samples should be put into bottles or tins, sealed up, and labelled. One sample should be sent to the Chemist, and one or more duplicates retained by the purchaser.

#### VEGETABLE PRODUCTS.

*Turnips, &c.*, at least 50 bulbs carefully selected as of fair average growth.

*Hay, straw, ensilage, &c.*, should be sampled from a thin section cut across the whole stack or silo, and carefully mixed; above 2 lb. weight is required for analysis.

*Grain* should be sampled like manures.

*Grass* should be representative of the whole field; about 5 lb. weight is required for analysis.

#### DAIRY PRODUCE.

*Milk*.—Samples of milk from individual cows should be taken direct from the milk-pail after complete milking. Average samples from a number of cows should be taken immediately after milking. Specify whether the sample is morning or evening milk, or a mixture of these. Samples to be tested for adulteration should not be drawn from the bottom or taken from the top of standing milk, but they should be ladled from the vessel after the milk has been thoroughly mixed. Samples of milk should be sent immediately to the Chemist.

For most purposes a half-pint bottle of milk is a large enough sample.

*Butter*.—About quarter-pound samples are required.

#### WATERS.

When the water is from a well, it should be pumped for some minutes before taking the sample.

If the well has been standing unused for a long time, it should be pumped for some hours, so that the water may be renewed as far as possible.

If the well has been newly dug or cleaned out, it should be pumped as dry as possible, daily, for a week before taking the sample.

Water from cisterns, tanks, ponds, &c., should be sampled by immersing the bottle entirely under the water, and holding it, neck



upwards, some inches below the surface. *Water from the surface should not be allowed to enter the bottle.*

Spring or stream water should not be sampled in very wet weather, but when the water is in ordinary condition. Such waters should be sampled by immersing the bottle. If not deep enough for that purpose, a perfectly clean cup should be used for transferring the water to the bottle.

When the bottle has been filled the stopper should be rinsed in the water before replacing it.

Interference with or disturbance of wells or springs, or the ground in their immediate vicinity, must be carefully avoided during sampling, and for at least twenty-four hours before it.

After a sample has been taken, it should be sent to the Chemist as speedily as possible.

A description of the source and circumstances of the water should accompany the sample, as the interpretation of the analytical results depends to some extent on a knowledge of such particulars.

*N.B.*—Stone jars and old wine bottles are unsuitable for conveying samples. Winchester quarts chemically cleaned should be obtained from Dr J. F. TOOHER, Crown Mansions, 41½ Union Street, Aberdeen.

COMPOSITION AND CHARACTERISTICS OF MANURES  
AND FEEDING-STUFFS.

(See 'Transactions,' Fifth Series, vol. vi., 1899.)

## FORMS OF GUARANTEE

## GUARANTEE OF MANURE.

I guarantee that the manure called.....and sold by me to  
.....contains—

<i>Soluble phosphoric acid</i> . . . . .	per cent.
<i>Insoluble phosphoric acid</i> . . . . .	per cent.
<i>Potash</i> . . . . .	per cent.
<i>Total nitrogen</i> . . . . .	per cent.

Date

19

Signature of seller . . . . .

## GUARANTEE OF FEEDING-STUFF.

I guarantee that the feeding-stuff called . . . . . and sold by me to  
..... contains—

<i>Albuminoids</i> . . . . .	per cent.
<i>Oil</i> . . . . .	per cent.
<i>Fibre</i> . . . . .	per cent.

Date

19

Signature of seller . . . . .

PRICES OF FERTILISERS AND FEEDING-STUFFS  
FOR SEASON 1936.

(Cash Prices as fixed on 5th February. These prices are subject to variation from month to month or oftener.)

## SUPERPHOSPHATES.

ITEM TO BE VALUED.	PRICES FOR THE UNDERGOED PERCENTAGES.		
PHOSPHORIC ACID DISSOLVED . =TRICALCIUM PHOSPHATE DISSOLVED	13 75 80	16 0 25	18 0 39 3
February Price per ton . . . . .	£2 12 6	£2 17 6	£3 2 6
Price per Unit . . . . .	3/9½	3/7½	3/6½

## FERTILISERS.

(Other than Superphosphates.)

Name of Fertiliser.	Guarantee.	Price per Ton.	Price per Unit.
Sulphate of Ammonia (neutral)*	20.6 % Nitrogen	£ s. d. 7 3 6	s. d. 6 11½
" " (March-June)	" "	7 5 0	7 0½
Basic Slag††	14 % Total Phos. Acid =30.80 % Tric. Phos.	2 11 0	3 7½
" " †	15 % Total Phos. Acid =32.75 % Tric. Phos.	2 12 6	3 6
" " †	15.75 % Total Phos. Acid =34.35 % Tric. Phos.	2 15 0	3 6 P 4 1
Potassic Slag	12 % Phos. Acid =26.21 % Tric. Phos.	3 10 0	Pot. 3 6
Bone Meal (Indian) (Glasgow)	6 % Potash 4 % Nit., 20 % Phos. Acid =43.68 % Tric. Phos.	5 17 0	N 13 0 P 3 8 N 14 9
Bone Meal (Home and Indian) (Leith)	" "	6 12 0	P 8 8½
Steamed Bone Flour	0.75 % Nit., 27.5 % Phos. Acid =60.06 % Tric. Phos.	5 10 0	N 14 5 P 3 7½
Calcium Cyanamide (Feb.)‡	20.6 % Nitrogen	7 2 6	0 11
" " (March)‡	" "	7 3 9	6 11½
Ground Mineral Phosphate§	26 % Phos. Acid =56.79 % Tric. Phos.	2 10 0	1 11
" " " §	34 % Phos. Acid =74.26 % Tric. Phos.	3 10 0	2 0½ P 2 7½
Phosphatic Lime (Belgian)¶	9 % Phos. Acid =19.68 % Tric. Phos.	2 5 0	Carb. of Lime 0 4 P 2 1
Potassic Mineral Phosphate	65 % Carb. of Lime 6 % Pot., 21 % Phos. Acid =45.87 % Tric. Phos.	3 2 6	Pot. 3 1½ P 2 1½
" " "	0 % Pot., 18 % Phos. Acid =39.30 % Tric. Phos.	3 7 6	Pot. 3 2½
Nitrate of Soda*	16 % Nitrogen	7 12 6	9 6½
Nitro Chalk*	15.5 % "	7 5 0	9 4½
Chilean Potassium Nitrate*	15 % Nit., 15 % Pot.	8 15 0	N 8 10½ Pot. 2 9½
Kainit	14 % Potash	3 0 0	4 3½
Potash Salts	30 % "	4 12 6	3 1
Sulphate of Potash	48.5 % "	8 17 6	3 8
Muriate of Potash	50 % "	7 10 0	3 0

Ground Lime, in bags (80 % calcium oxide), at Dufftown or Grange, 37/- per ton; (70 % calcium oxide) at Charleston, 35/- per ton; at Dunbar, 32/6 per ton; (75 % calcium oxide) at Culls, 33/- per ton; at Fushiebridge, 30/- per ton; (85 % calcium oxide) at Culls, 40/- per ton.

English Ground Lime (76 % calcium oxide), to Edinburgh, 36/6 per ton; to Lanark, 34/6 per ton; to Stirling, 37/6 per ton.

English Ground Lime (95 % calcium oxide), to Edinburgh, 47/- per ton.

Ground Shell Lime to Dumfries, in six-ton lots (80 % calcium oxide), 32/- per ton; (90 % calcium oxide), 35/- per ton.

Ground Limestone (94 % calcium carbonate), to Edinburgh, 37/- per ton; to Lanark, 26/- per ton; to Stirling, 28/6 per ton; (96 % calcium carbonate), to Dumfries, 23/6 per ton; in six-ton lots. Bags to be returned to sender.

The prices for all fertilisers are cash prices for two-ton lots in bags at Leith or Glasgow, unless otherwise stated. Where prices are quoted carriage paid, there is a reduction, in certain cases, of from 5/- to 10/- per ton when lifted Ex Sellers' stores.

\* Carriage paid to any railway station in six-ton lots. Four-ton lots 1/- more per ton.

† Price at Leith (5/- less Ex. ship).

‡ The fineness of Basic Slag is such that 80 % of the powder will pass through the standard sieve.

§ 90 % passing through standard sieve. ¶ Four-ton lots carriage paid. ¶ Price at Dumfries.

*N.B.—When these units are multiplied by the percentages in the analysis of a Manure, they will produce a value representing very nearly the cash price per ton at which TWO TONS may be bought in the above condition at Leith or Glasgow. Larger purchases may be made on more favourable terms.*

### FEEDING-STUFFS.

Name of Feeding-Stuff.	Price per Ton.	Name of Feeding-Stuff.	Price per Ton.
	£ s. d.		£ s. d.
Linseed Cake (Home), 8% Oil, 28% Albuminoids . . . . .	7 7 6	Medium Bran (Leith) . . . . .	6 10 0
Linseed Cake (Imported) . . . . .	6 17 6	(Glasgow) . . . . .	6 10 0
Cotton Seed Cake (Egyptian) (undecorticated) at Leith 4.5% Oil, 22% Albuminoids . . . . .	4 15 0	Thirds or Farings . . . . .	6 10 0
Ground Nut Cake—Leith—Decorticated (Expeller), 8% Oil, 42% Albuminoids, 18% Fibre . . . . .	7 2 6	Dried Distillery Grains . . . . .	6 10 0
Decorticated (Expeller), 8% Oil, 46% Albuminoids, 8% Fibre . . . . .	7 5 0	Brewers' Grains . . . . .	4 18 6
Decorticated Cotton Seed Cake—8% Oil, 42% Albuminoids . . . . .	7 7 6	Feeding Treacle . . . . .	6 5 0
Decorticated Cotton Seed Cake—6% Oil, 42% Albuminoids . . . . .	6 15 0	Locust Beans (Kibbled)* . . . . .	6 12 6
Decorticated Cotton Seed Meal—7% Oil, 42% Albuminoids . . . . .	7 15 0	Maize (Round Plate)* . . . . .	4 7 6
Palm Kernel Cake . . . . .	5 0 0	(Flaked)* (Leith) . . . . .	5 12 6
Rice Bran Meal . . . . .	7 0 0	(Glasgow) . . . . .	6 5 0
Broad Bran . . . . .	7 0 0	Beans (Imported China) (Glasgow) . . . . .	7 7 6
		Bean Meal . . . . .	8 5 0
		Soya Bean Meal (extracted). . . . .	7 15 0
		Home Oats (Feeding) . . . . .	5 5 0
		White Fish Meal (Aberdeen) . . . . .	18 10 0
		"    "    (Leith) . . . . .	14 5 0
		"    "    (Glasgow). . . . .	14 5 0
		Ground Barley . . . . .	6 0 0
		Skim Milk Powder † . . . . .	19 0 0
		"    "    "    † . . . . .	18 0 0

**In Railway Sacks.**

† In two-ton lots delivered.

‡ In four-ton lots delivered.

### CLASSIFICATION OF MANURES.

BONE MEALS . . .	{	Genuine Bone Meal contains about 20 per cent Phosphoric Acid equal to 43·7 per cent Tricalcium Phosphate, and about 4 per cent Nitrogen. If phosphates are low, Nitrogen will be high, and conversely.
STEAMED BONE FLOUR . . .	{	Ground to flour, and containing 27·5 per cent Phosphoric Acid equal to about 60 per cent Phosphates and about ·8 per cent Nitrogen.
MIXTURES AND COMPOUND MANURES . . .		To be valued according to the following units: Nitrogen, 7/-; Soluble Phosphoric Acid, 8/9; Insoluble Phosphoric Acid, 2/9; and Potash, 8/6. The value so arrived at will be the value at Leith or Glasgow, exclusive of the cost of mixing, bags and bagging, which may be taken on an average at about 20/- per ton.
DISSOLVED BONES . . .	{	Must be pure—i.e., containing nothing but natural bones and sulphuric acid.

### INSTRUCTIONS FOR VALUING MANURES.

The unit used for the valuation of manures is the hundredth part of a ton, and as the results of analyses of manures are expressed in parts per hundred, the percentage of any ingredient of a manure when multiplied by the price of the unit of that ingredient represents the value of the quantity of it contained in a ton.

As an example take muriate of potash; a good sample (see p. 42) will be guaranteed to contain 50 per cent of oxide of potash. All potash manures are valued according to the amount of potash (oxide of potash) they yield, and muriate of potash yields 50 per cent of potash ( $K_2O$ )—i.e., 50 units per ton; and as a ton of muriate of potash costs £7, 10s., the price of the unit is the fiftieth part of that—viz., 3/-. If on analysis a sample of muriate of potash guaranteed to contain 50 per cent of potash is found to contain only 47 per cent, the price per ton will be 9/- (three times 3/-) less—viz., £7, 1s.

Similarly with all other manures, the price per unit is derived from

the price per ton of a sample of good material up to its guarantee, and therefore the proper price per ton of a manure is found by multiplying the price of the unit of the valuable ingredient by the percentage as found by analysis. If a manure contains more than one valuable ingredient, the unit value of each ingredient is multiplied by its percentage, and the values so found when added together give approximately the price per ton of the manure.

Nitrate of soda contains no ammonia, but it contains nitrogen, and 14 units of nitrogen are equivalent to 17 units of ammonia.

The commercial values of manures are determined by means of the UNITS in the following manner:—

Take the results of analysis of the manure, and look for the following substances:—

Phosphates dissolved (or soluble phosphoric acid)	
Phosphates undissolved (or insoluble phosphoric acid)	No other items but these are to be valued.
Total phosphoric acid	
Nitrogen	
Potash	

Should the results of analysis or the guarantee not be expressed in that way, the chemist or the seller should be asked to state the quantities in these terms.

Suppose the manure is ground mineral phosphate—

The proportion of phosphate present in a sample guaranteed to contain 26 per cent phosphoric acid, may be 24 per cent phosphoric acid. The price per unit of phosphoric acid in ground mineral phosphate (26 per cent grade) is 1s. 11d. The value of ground mineral phosphate containing 24 per cent phosphoric acid is therefore 24 times 1s. 11d., equal to £2, 6s. per ton.

Suppose the manure is a superphosphate—say an ordinary superphosphate, 15 per cent soluble phosphoric acid,—the price per unit of phosphoric acid in superphosphate (16 per cent grade) is 3/7½ at Leith.

It is valued thus—

Soluble phosphoric acid. 15 times 3/7½, equal to £2, 14s. 1d.

Insoluble phosphoric acid is not valued in a superphosphate.

Suppose the manure is a compound fertiliser containing 4 per cent nitrogen, 7 per cent soluble phosphoric acid, 3 per cent insoluble phosphoric acid, and 4 per cent potash. From the units given on p. 43 for "Mixtures and Compound Manures," the value of this compound fertiliser is obtained as follows:—

The value of the—

Nitrogen will be . . . . .	£1	8	0	per ton
Soluble phosphoric acid will be . . . . .	1	6	3	"
Insoluble phosphoric acid will be . . . . .	0	8	3	"
Potash will be . . . . .	0	14	0	"

£3 16 6

The value of this manure will thus be £3, 16s. 6d. per ton, exclusive of the cost of mixing, bags and bagging, which may be taken on an average at about 20/- per ton.

*Note.*—The units have reference solely to the MARKET PRICES of MANURES, and not to their AGRICULTURAL VALUES.

## TABLE OF COMPENSATION VALUES FOR 1936.

TABLE SHOWING THE VALUE OF FEEDING-STUFFS AS MANURE PER TON, AND THE COMPENSATION VALUE PER TON OF FOOD CONSUMED, BASED ON THE AVERAGE UNIT PRICES OF FERTILISERS FOR 1936.

The following is a Table showing (under Section A) the average proportions of digested nitrogen, undigested nitrogen, phosphoric acid, and potash present in the feeding-stuffs named. The Table also shows the value per unit of nitrogen (digested and undigested), phosphoric acid, and potash, the prices per unit being the value per unit for compound manures prevailing for 1936. Under Section B of the Table is shown the compensation value per ton of food consumed for each of the feeding-stuffs named, based on the unit prices for 1936. Column (1) of Section B of the Table shows the value per ton recovered in dung; Col. (2) of the same section shows the value of the lasting part of dung per ton; while the remaining three columns show the residual values per ton after one crop, two crops, and three crops have been removed.

In accordance with the decision arrived at by the Committee appointed by a representative meeting of Scottish agriculturists, who reported in September 1917 on the "Compensation for Manurial Improvements and Cumulative Fertility," under the Agricultural Holdings (Scotland) Act, 1908, the value of undigested nitrogen per ton as manure is calculated as being 70 per cent of the value of digested nitrogen. The residual value, after one crop has been removed, is taken as one-half of the original residual value. Residual values, after one crop has been removed, are reduced by one-half after each crop.

Foods.	VALUE PER					
	Digested Nitrogen.			Undigested Nitrogen.		
	Per cent in food.	Value at 7s. per unit.	Two-fifths value to manure.	Per cent in food.	* Value at 5s. per unit.	Three-fourths value to manure.
	(1)	(2)	(3)*	(4)	(5)	(6)
Cotton-cake, decorticated . . . . .	5.92	s. d. 41 5	s. d. 16 7	0.98	s. d. 4 11	s. d. 3 8
Cotton-cake, undecorticated . . . . .	2.73	19 1	7 8	0.81	4 1	3 1
Linseed-cake . . . . .	4.08	28 7	11 5	0.67	3 4	2 6
Linseed . . . . .	3.28	23 0	9 2	0.32	1 7	1 2
Soya-bean cake . . . . .	6.10	42 8	17 1	0.75	3 9	2 10
Palm-nut cake . . . . .	1.58	13 2	5 3	0.62	3 1	2 4
Cocoa-nut cake . . . . .	2.65	18 7	7 5	0.75	3 9	2 10
Earth-nut cake . . . . .	6.86	48 0	19 2	0.76	3 10	2 11
Rape cake . . . . .	3.97	27 9	11 1	0.93	4 8	3 6
Beans . . . . .	3.48	24 4	9 9	0.52	2 7	1 11
Peas . . . . .	3.10	21 8	8 8	0.50	2 6	1 11
Wheat . . . . .	1.49	10 5	4 2	0.31	1 7	1 2
Barley . . . . .	1.16	8 1	3 3	0.49	2 5	1 10
Oats . . . . .	1.52	10 8	4 3	0.43	2 5	1 10
Maize . . . . .	1.22	8 6	3 5	0.43	2 5	1 10
Rice-meal . . . . .	1.03	7 7	3 0	0.82	4 1	3 1
Locust beans . . . . .	0.82	5 9	2 4	0.33	1 11	1 5
Malt . . . . .	1.34	9 5	3 9	0.36	1 10	1 5
Malt culms . . . . .	3.12	21 10	8 9	0.73	3 11	2 11
Bran . . . . .	1.93	13 10	5 6	0.52	2 7	1 11
Brewers' and distillers' grains (dried) . . . . .	2.34	16 5	6 7	0.96	4 10	3 8
Brewers' and distillers' grains (wet) . . . . .	0.59	4 2	1 8	0.22	1 1	0 10
Dried distillery dreg . . . . .	3.45	24 2	9 8	1.86	9 4	7 0
Clover hay . . . . .	1.21	8 6	3 5	1.03	5 2	3 11
Meadow hay . . . . .	0.83	6 2	2 6	0.62	3 1	2 4
Wheat straw . . . . .	0.02	0 2	0 1	0.43	2 2	1 8
Barley straw . . . . .	0.10	0 8	0 3	0.30	1 6	1 2
Oat straw . . . . .	0.17	1 2	0 6	0.33	1 8	1 3
Mangolds . . . . .	0.15	1 1	0 5	0.07	0 4	0 3
Swedes . . . . .	0.16	1 1	0 5	0.09	0 5	0 4
Turnips . . . . .	0.13	0 11	0 4	0.05	0 3	0 2
Fish-meal . . . . .	3.03	56 7	22 3	0.90	4 6	3 5

See last paragraph of explanatory note to the Table.

A.						B.						
TON AS MANURE.						COMPENSATION VALUE PER TON OF FOOD CONSUMED.						
Phosphoric Acid.			Potash.			† (1) Value re- covered in dung. (13)*	† (2) Value of lasting part of dung. (14)	Residual Value after				
Per cent in food (7)	Value at 3s. 9d. per unit. (8)	Three- fourths value to manure. (9)	Per cent in food. (10)	Value at 3s. 6d. per unit. (11)	Three- fourths value to manure. (12)			(*) One crop. (15)	(*) (4) Two crops. (16)	(*) (5) Three crops. (17)		
	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
3.10	11 8	8 9	2.00	7 0	5 3	34 3	17 8	8 10	4 5	2 3		
2.00	7 6	5 8	2.00	7 0	5 3	21 8	14 0	7 0	3 6	1 9		
2.00	7 6	5 8	1.40	4 11	3 8	28 3	11 10	5 11	3 0	1 6		
1.54	5 9	4 4	1.37	4 10	3 7	18 3	9 1	4 7	2 3	1 2		
1.30	4 11	3 8	2.20	7 8	5 9	29 4	12 3	6 2	3 1	1 6		
1.20	4 6	3 5	0.50	1 9	1 4	12 4	7 1	3 7	1 9	0 11		
1.40	5 3	3 11	2.00	7 0	5 3	19 5	12 0	6 0	3 0	1 6		
2.00	7 6	5 8	1.50	5 3	3 11	31 8	12 6	6 3	3 2	1 7		
2.50	9 5	7 1	1.50	5 3	3 11	25 7	14 6	7 3	3 3	1 10		
1.10	4 2	3 2	1.30	4 7	3 5	18 3	8 6	4 3	2 2	1 1		
0.85	3 2	2 5	0.96	3 4	2 6	15 6	6 10	3 5	1 9	0 10		
0.85	3 2	2 5	0.53	1 10	1 4	9 1	4 11	2 6	1 3	0 7		
0.75	2 10	2 2	0.55	1 11	1 5	8 8	5 5	2 9	1 4	0 8		
0.60	2 3	1 8	0.50	1 9	1 4	9 1	4 10	2 5	1 3	0 7		
0.60	2 3	1 8	0.37	1 4	1 0	7 11	4 6	2 3	1 2	0 7		
0.60	2 3	1 8	0.37	1 4	1 0	8 9	5 9	2 11	1 5	0 9		
0.80	3 0	2 3	0.80	2 10	2 1	8 1	5 9	2 11	1 5	0 9		
0.80	3 0	2 3	0.80	2 1	1 7	9 0	5 3	2 8	1 4	0 8		
2.00	7 6	5 8	2.00	7 0	5 3	22 7	13 10	6 11	3 6	1 9		
2.70	10 2	7 8	1.45	5 1	3 10	13 11	13 5	6 9	3 4	1 8		
1.61	6 0	4 6	0.20	0 8	0 6	15 3	8 8	4 4	2 2	1 1		
0.42	1 7	1 2	0.05	0 2	0 2	3 10	2 2	1 1	0 7	0 3		
0.44	1 8	1 3	0.22	0 9	0 7	18 6	8 10	4 5	2 3	1 1		
0.57	2 2	1 3	1.50	5 3	3 11	12 11	9 6	4 9	2 5	1 2		
0.40	1 6	1 2	1.60	5 7	4 2	10 2	7 8	3 10	1 11	1 0		
0.24	0 11	0 8	0.80	2 10	2 1	4 6	4 5	2 3	1 1	0 7		
0.18	0 8	0 6	1.00	3 6	2 7	4 6	4 3	2 2	1 1	0 6		
0.24	0 11	0 8	1.00	3 6	2 7	5 0	4 6	2 3	1 2	0 7		
0.07	0 3	0 2	0.40	1 5	1 1	1 11	1 6	0 9	0 5	0 2		
0.06	0 3	0 2	0.22	0 9	0 7	1 6	1 1	0 7	0 3	0 2		
0.05	0 2	0 2	0.30	1 1	0 10	1 6	0 4	0 2	0 1	0 1		
7.24	27 2	20 5	0.50	1 9	1 4	47 10	25 2	12 7	6 4	3 2		

† The figures in column (13) are the sum of columns (3), (6), (9), and (12).

‡ The figures in column (14) are the figures in column (13) from which the corresponding figures in column (3) have been subtracted.



## BOTANICAL DEPARTMENT

*Consulting Botanist to the Society—(vacant).*

The Society has fixed the following scale of charges for the examination of plants and seeds for the *bona fide* and individual use and information of members of the Society (not being seedsmen), who are particularly requested, when applying to the Consulting Botanist, to mention the kind of examination required, and to quote its number as appearing in the undernoted Scale of Charges. The charge for examination must be paid at the time of application, and the carriage or postage on all parcels must be prepaid.

### *Scale of Charges for Examinations.*

1. A report on the purity, amount, and nature of foreign materials, and the germinating power of a sample of seed . . . 1s.
2. Determination of the species of any weed or other plant, or of any vegetable parasite, with a report on its habits and the means for its extermination or prevention . . . 1s.
3. Report on any disease affecting farm crops . . . 1s.
4. Determination of the species of any natural grass or fodder plant, with a report on its habits and pasture or feeding value . . . 1s.

The Consulting Botanist's Reports are furnished to enable members—purchasers of seeds and corn for agricultural or horticultural purposes—to test the value of what they buy, and are not to be used or made available for advertising or trade purposes by seedsmen or otherwise.

### *Purchase of Seeds.*

The purchaser should obtain from the vendor, by invoice or other writing, the proper designation of the seeds bought, with a guarantee of the percentage of purity and germination, and of its freedom from ergot, and in the case of clover, from the seeds of dodder or broomrape.

It is strongly recommended that the purchase of *prepared mixtures* of seeds should be avoided. The different seeds should be purchased separately and mixed by the farmer: mixtures cannot be tested for germination.

### *The Sampling of Seeds.*

The utmost care should be taken to secure a fair and honest sample. This should be drawn from the bulk delivered to the purchaser, and not from the sample sent by the vendor.

When legal evidence is required, the sample should be taken from the bulk, and placed in a sealed bag in the presence of a witness. Care should be taken that the sample and bulk be not tampered with after delivery, or mixed or brought in contact with any other sample or bulk.

At least one ounce of grass and other small seeds should be sent, and two ounces of cereals and the larger seeds. When the bulk is obviously impure the sample should be at least double the amount specified. Grass seeds should be sent at least four weeks, and seeds of clover and cereals two weeks, before they are to be used.

The exact name under which the sample has been sold and purchased should accompany it.

### *Reporting the Results.*

The Report will be made on a schedule in which the nature and amount of impurities will be stated, and the number of days each sample has been under test, with the percentage of the seeds which have germinated.

"Hard" clover seeds, though not germinating within the time stated, will be considered good seeds, and their percentage separately stated.

The impurities in the sample, including the chaff of the species tested, will be specified in the schedule, and only the percentage of the pure seed of that species will be reported upon; but the REAL VALUE of the sample will be stated. The Real Value is the combined percentages of purity and germination, and is obtained by multiplying these percentages and dividing by 100: thus in a sample of Meadow Fescue having 88 per cent purity and 95 per cent germination, 88 multiplied by 95 gives 8360, and this divided by 100 gives 83.6. the Real Value.

### *Selecting Specimens of Plants.*

The whole plant should be taken up and the earth shaken from the roots. If possible the plants should be in flower or fruit. They must be packed in a light box, or in a firm paper parcel.

Specimens of diseased plants or of parasites should be forwarded as fresh as possible. They must be placed in a bottle, or packed in tinfoil or oil-silk.

All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstances (soil, situation, &c.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

NOTE.—Members are reminded that Seeds may now be tested at the Department of Agriculture for Scotland Seed-testing Station. Samples should be addressed to T. Anderson, Esq., Seed-testing Station, East Craigs, Corstorphine, Edinburgh.

## ENTOMOLOGICAL DEPARTMENT

*Consulting Entomologist to the Society*—A. E. CAMERON, M.A., D.Sc.,  
Department of Entomology, University of Edinburgh, 10 George  
Square, Edinburgh.

### REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Entomologist is prepared to send to any Member of the Society a Report on damage to or diseases of plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals), and will advise Members regarding insects or allied animals which, in any stage of their development, infest—

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| (a) Farm crops.                   | (d) Fruit and fruit trees.          |
| (b) Stored grain.                 | (e) Forest trees and stored timber. |
| (c) Garden and greenhouse plants. | (f) Live stock (including poultry). |

Any Member consulting Dr Cameron should give him full particulars of the damage or disease upon which his advice is desired. In addition, there should be sent to him specimens of the injured plants, or the injured parts of plants, &c., as well as specimens of the insects or animals believed to be the cause of the injury.

Specimens should be sent in tin or wooden boxes, or in quills, in order to prevent injury in transmission.

The Directors have fixed the fee payable by Members to Dr Cameron at 2s. 6d. for each case upon which he is consulted: this fee should be sent to him along with the application for information.

Letters and parcels (carriage or postage paid) should be addressed to A. E. Cameron, Esq., M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh.

## PREMIUMS OFFERED

1936

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### GROUP 1.—REPORTS.

#### GENERAL REGULATIONS.

1. It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the writers whose papers are published in the 'Transactions.'

2. All reports must be legibly written, and on one side of the paper only; they must specify the number and subject of the Premium for which they are in competition; they must bear a distinguishing motto, and be accompanied by a sealed letter, similarly marked, containing the name and address of the reporter—initials must not be used.

3. No sealed letter, unless belonging to a report found entitled to the Premium offered, or a portion of it, will be opened without the author's consent.

4. Reports for which a Premium, or a portion of a Premium, has been awarded, become the property of the Society, and cannot be published in whole or in part, or circulated in any manner, without the consent of the Directors. All other papers will be returned to the authors if applied for within twelve months.

5. The Society is not bound to award the whole or any part of a Premium.

6. All reports must be of a practical character, containing the results of the writer's own observation or experiment, and the special conditions attached to each Premium must be strictly fulfilled. General essays, and papers compiled from books, will not be rewarded or accepted. Weights and measurements must be indicated by the imperial standards.

7. The Directors, before or after awarding a Premium, shall have power to require the writer of any report to verify the statements made in it.

8. The decisions of the Board of Directors are final and conclusive as to all matters relating to Premiums, whether for Reports or at General or District Shows; and it shall not be competent to raise any question or appeal touching such decisions before any other tribunal.

9. The Directors will welcome papers from any Contributor on any suitable subject, whether included in the Premium List or not; and if the topic and the treatment of it are both approved, the writer may be remunerated and his paper published.

## SECTION 1.—THE SCIENCE AND PRACTICE OF AGRICULTURE.

### FOR APPROVED REPORTS.

1. On any useful practice in Rural Economy adopted in other countries, and susceptible of being introduced with advantage into Scotland—The Gold Medal. To be lodged by 1st November in any year.

The purpose chiefly contemplated by the offer of this premium is to induce travellers to notice and record such particular practices as may seem calculated to benefit Scotland. The Report to be founded on personal observation.

2. Approved Reports on other suitable subjects. To be lodged by 1st November in any year.

## SECTION 2.—ESTATE IMPROVEMENTS.

### FOR APPROVED REPORTS.

1. By the Proprietor in Scotland who shall have executed the most judicious, successful, and extensive Improvement—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

Should the successful Report be written for the Proprietor by his resident factor or farm manager, a Minor Gold Medal will be awarded to the writer in addition to the Gold Medal to the Proprietor.

The merits of the Report will not be determined so much by the mere extent of the improvements, as by their character and relation to the size of the property. The improvements may comprise reclaiming, draining, enclosing, planting, road-making, building, and all other operations proper to landed estates. The period within which the operations may have been conducted is not limited, except that it must not exceed the term of the Reporter's proprietorship.

2. By the Proprietor or Tenant in Scotland who shall have reclaimed within the ten preceding years not less than forty

acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

3. By the Tenant in Scotland who shall have reclaimed within the ten preceding years not less than twenty acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

4. By the Tenant in Scotland who shall have reclaimed not less than ten acres within a similar period—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The Reports in competition for Nos. 2, 3, and 4 may comprehend such general observations on the improvement of waste lands as the writer's experience may lead him to make, but must refer especially to the lands reclaimed—to the nature of the soil—the previous state and probable value of the subject—the obstacles opposed to its improvement—the details of the various operations—the mode of cultivation adopted—and the produce and value of the crops produced. As the required extent cannot be made up of different patches of land, the improvement must have relation to one subject; it must be of profitable character, and a rotation of crops must have been concluded before the date of the Report. *A detailed statement of the expenditure and return* and a certified measurement of the ground are requisite.

5. By the Proprietor or Tenant in Scotland who shall have improved within the ten preceding years the Pasturage of not less than thirty acres, by means of top-dressing, draining, or otherwise, without tillage, in situations where tillage may be inexpedient—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

6. By the Tenant in Scotland who shall have improved not less than ten acres within a similar period—The Minor Gold Medal. To be lodged by 1st November in any year.

Reports in competition for Nos. 5 and 6 must state the particular mode of management adopted, the substances applied, the elevation and nature of the soil, its previous natural products, and the changes produced.

### SECTION 3.—HIGHLAND INDUSTRIES.

#### FOR APPROVED REPORTS.

1. The best mode of treating native Wool; cleaning, carding, dyeing, spinning, knitting, and weaving by hand in the Highlands and Islands of Scotland—Five Pounds. To be lodged by 1st November in any year.

**SECTION 4.—MACHINERY.****FOR APPROVED REPORTS.**

To be lodged by 1st November in any year.

**SECTION 5.—FORESTRY.****FOR APPROVED REPORTS.**

1. On Plantations of not less than eight years' standing formed on deep peat-bog—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The premium is strictly applicable to deep peat or flow moss ; the condition of the moss previous to planting, as well as at the date of the Report, should, if possible, be stated.

The Report must describe the mode and extent of the drainage, and the effect it has had in subsiding the moss—the trenching, levelling, or other preliminary operations that may have been performed on the surface—the mode of planting—kinds, sizes, and number of trees planted per acre—and their relative progress and value, as compared with plantations of a similar age and description grown on other soils in the vicinity

## GROUP II.—DISTRICT GRANTS.

## APPLICATIONS.

Forms of Application may be obtained from the Secretary, 8 Eglinton Crescent, Edinburgh 12, which should be completed and returned on or before **1st November 1936**, in respect of a Grant commencing in the following year.

**RENEWAL OF GRANT.**—Applications for **renewal** of a particular Grant will be entertained only after the lapse of a specified interval of years (as undernoted) from the termination of the previous Grant, without prejudice, however, to the competency of applying in such intermediate years for a Grant in any other class.

Class.	Interval.
1. Grant of £12 for Show Premiums for Horses, Cattle, Sheep, and Pigs . . . . .	4 years.
2. Grant of £15 in respect of Stallion engaged for Agricultural purposes . . . . .	4 years.
3. Two Silver Medals in aid of Premiums . . . . .	2 years.
4. Special Grants . . . . .	—
5. Grant of £10 to Federations of S.W.R.L. . . . .	2 years.

## CLASS 1.

## LOCAL SOCIETIES—GRANTS OF £12 FOR SHOW PREMIUMS FOR HORSES, CATTLE, SHEEP, AND PIGS.

## REGULATIONS, 1936.

1. **CLASS OF STOCK—LIMIT OF GRANTS, £340.**—The Highland and Agricultural Society will make Grants to Local Societies for prizes for *Breeding Animals* in any of the following Classes of Stock, viz.:—

<i>Cattle.</i>	<i>Horses.</i>
Shorthorn.	Draught Horses.
Aberdeen-Angus.	Hunters.
Galloway.	Hackneys.
Belted Galloway.	Ponies.
Highland.	Shetland Ponies.
Ayrshire.	<i>Sheep.</i>
British Friesian.	Blackface.
Red Poll.	Cheviot.
Jersey.	Border Leicester.
Shetland.	Half-Bred.
	Shropshire.
	Oxford Down.
	Suffolk.
	Wensleydale.
<i>Pigs.</i>	
Any Pure Breed.	

Cross-bred <sup>1</sup> animals are not eligible. The Prizes must be confined to *Breeding Animals*; "bullocks," "geldings," "wethers," and "hog pigs" are excluded.

<sup>1</sup> *Exceptions to this rule may, however, be authorised by the Board of Directors, on application. The Directors are prepared to consider applications from local Societies which desire to use their grants, or part thereof, as prizes for cross-bred calves and one-year-old cross-bred cattle.*



2. All Competitions must be at the instance of a Local Society. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society must be a Member of the Highland and Agricultural Society of Scotland.

3. GRANT TO SOCIETY, £12.—The portion of the Grant to any one Local Society shall not exceed the sum of £12 in any one year.

4. ALLOCATION OF GRANT.—The Grant from the Highland and Agricultural Society shall not be applied as a Grant in aid of the Premiums offered by the Local Society, but must be offered in the form of separate Prizes for the Animals chosen; and the offer of the Prizes must be announced in the Premium List and Catalogue of the Show as "presented by the Highland and Agricultural Society of Scotland."

5. CONTINUANCE OF GRANT—THREE YEARS.—The Money Grant shall continue for three alternate years, provided always that the Local Society shall, in the two intermediate years, continue the competition by offering Premiums for the same class of Stock as that selected in each previous year to compete for the Highland and Agricultural Society's Prizes.

If no competition takes place for two consecutive years the Grant expires.

6. MEDALS IN INTERMEDIATE YEARS.—In the two intermediate years the Highland and Agricultural Society will place three Silver Medals at the disposal of each Local Society, for the same classes of Stock as those for which the Money Premiums are offered, provided that not less than three lots are exhibited in the same class.

7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no provincial Show may be held in that district in the three months immediately preceding the date of the General Show. In the event of a Show being held, the entire grant to the Society will be cancelled.

8. RULES OF COMPETITION.—The Rules of Competition for the Premiums, the funds for which are derived from Grants of the Highland and Agricultural Society, shall be such as are generally enforced by the Society receiving the Grant for Premiums offered by itself.

9. AREA AND PARISHES—FIVE PARISHES.—When making application for Grants from the Highland and Agricultural Society, the Local Society must delineate the area and the number of parishes comprised in the district, and, *except in special cases*, no Local Society shall be entitled to a Grant whose show is not open to at least five Parishes.

10. REPORTS.—Forms of Report will be furnished to the Secretaries of Local Societies. Both in the years when the Grant is offered and in the two intermediate years, detailed reports of the competition must be given on these Forms and lodged with the Secretary of the Highland and Agricultural Society as soon as possible after the Show, and in no case later than 1st November. These reports are subject to the approval of the Directors of the Highland and Agricultural Society, against whose decision there shall be no appeal. All Reports must be signed and certified as marked on the Form. The Grant will lapse if no Report is lodged.

11. GRANTS—WHEN PAID.—The Grants made to Local Societies will be paid in December after the Reports of the awards of the prizes have been received and found to be in order and passed by

the Board of Directors, the Money Grants being paid to the Secretaries of the Local Societies and the Medals sent direct to the winners. *The Secretary of the Local Society must not on any condition whatever pay any premium offered by the Highland and Agricultural Society until he has been informed that the awards are in order and has received the Grant from the Highland and Agricultural Society.*

12. RENEWAL OF GRANT.—No application for renewal of a Money Grant to a Local Society will be entertained until the expiration of *four years* from the termination of the last Grant.

13. DISPOSAL OF APPLICATIONS.—In disposing of applications for District Grants, the Directors of the Highland and Agricultural Society shall keep in view the length of interval that has elapsed since the expiration of the last Grant, giving priority to those Local Societies which have been longest off the list.

### Grants in 1936.

5th and Final Year—GRANT OF £12.

#### 1. DALKEITH AGRICULTURAL SOCIETY.

*Convener*—John Kerr, Yorkston, Gorebridge.

*Secretary*—William Carnegie, Auction Mart, Dalkeith.

Granted 1930. (Grant in abeyance 1931, on account of Hundredth Show, Edinburgh; Grant in abeyance 1935.)

#### 2. LATHERON LANDHOLDERS' SHOW SOCIETY.

*Convener*—John Gunn, Jun., Lybster Mains, Lybster, Caithness.

*Secretary*—David Sutherland, Elmbank, Latheronwheel, Caithness.

Granted 1931. (Grant in abeyance 1933.)

#### 3. LAMMERMOOR PASTORAL SOCIETY.

*Convener*—.....

*Hon. Secretary and Treasurer*—Thomas Stephenson, Duns.

Granted 1931. (Grant in abeyance 1931.)

#### 4. UPPER DONSDALE AGRICULTURAL SOCIETY.

*Convener*—James Strachan, New Mains, Glenkindie.

*Secretary*—Alexander Kellas, Hillockhead, Cushnie, Alford.

Granted 1931. (Grant in abeyance 1934.)

#### 5. ESKDALE AND LUDDESDALE AGRICULTURAL AND PASTORAL SOCIETY.

*Convener*—Andrew Douglas, Jun., Saughtree, Newcastleton.

*Secretary*—James Fairful, 56 Henry Street, Langholm.

Granted 1932.

#### 6. NITHSDALE AGRICULTURAL SOCIETY.

*Convener*—Charles W. Ralston, Holmhill, Thornhill, Dumfriesshire.

*Secretary*—W. M. Henderson, Solicitor, Thornhill, Dumfriesshire.

Granted 1932.

## 7. KINCARDINESHIRE FARMERS' CLUB.

*Convener*—Alexander Anderson, Burnton, Laurencekirk.*Secretary*—James B. Cannon, Solicitor, Stonehaven.

Granted 1932.

## 8. STRATHAVEN AND DISTRICT AGRICULTURAL EXPOSITION.

*Convener*—Peter Meikle, M.R.C.V.S., Avonholme, Strathaven.*Secretary*—Alexander O. Jennings, Welland Villa, Strathaven.

Granted 1932.

## 9. MORAYSHIRE FARMER CLUB.

*Convener*—A. G. G. Ellis, Shempston, Elgin.*Secretary*—W. Rose Black, Solicitor, Elgin.

Granted 1932.

## 10. WEST LINTON AGRICULTURAL SOCIETY.

*Convener*—Captain R. J. Thomson of Kaimes, West Linton*Secretary*—David Alston, 50 Queen Street, Edinburgh.

Granted 1932.

## 11. DOUNE AGRICULTURAL ASSOCIATION.

*Convener*—R. W. Fairweather, Estate Office, Blair-Drummond, Perthshire.*Secretary*—Thomas B. Holmes, Deanston Farm, Doune.

Granted 1932.

## 12. WIGTOWN AGRICULTURAL SOCIETY.

*Convener*—Andrew McKeand, Airlies, Whauphill.*Secretary*—Gavin Coupland, Beechwood, Wigtown.

Granted 1932.

## 4th (Intermediate) Year—3 SILVER MEDALS.

## 13. BUCHAN AGRICULTURAL SOCIETY.

*President*—John S. Grant, Skillymarno, Strichen, Aberdeenshire.*Secretary*—Robert Scott, 1 Narrow Lane, Peterhead.

Granted 1933.

## 14. VALE OF ALFORD AGRICULTURAL ASSOCIATION.

*Convener*—Lord Forbes, Castle Forbes, Whitehouse, Aberdeenshire.*Secretary*—Robert S. Law, East Cevidley, Keig, Aberdeenshire.

Granted 1933.

## 15. LARGS, CUMBRAN AND WEMYSS BAY AGRICULTURAL SOCIETY.

*Convener*—John S. Wilson, 21 Crawford Street, Greenock.*Secretary*—Alexander Grant, Crawford Lea, Brisbane Road, Largs.

Granted 1933.

## 16. DUMFRIES AGRICULTURAL SOCIETY.

*Convener*—James A. Ferguson, Burrance of Courance, Lockerbie.*Secretary*—David Fergusson, 75 Buccleuch Street, Dumfries.

Granted 1933.

17. WESTERN DISTRICT OF FIFE AGRICULTURAL SOCIETY.

*Convener*—Major W. B. Robertson of Colton, Dunfermline.

*Secretary*—W. Craig Husband, Union Bank Chambers, High Street, Dunfermline.

Granted 1933.

18. KIRKPATRICK-DURHAM HORTICULTURAL AND AGRICULTURAL SOCIETY.

*Convener*—Mungo G. Bryson, Boreland of Parton, Castle Douglas.

*Secretary*—J. A. Peacock, Kirkpatrick-Durham, Dalbeattie.

Granted 1933.

19. SHOTTS CALDERWATERHEAD FARMERS' SOCIETY.

*Convener*—John Weir, Shottsburn Farm, Salsburgh, Motherwell.

*Secretary*—Robert Martin, Lochfield, Caledonian Road, Wishaw.

Granted 1933.

20. WHITBURN AGRICULTURAL SOCIETY.

*Convener*—James G. Sibbald, Hardhill, Bathgate.

*Secretary*—P. A. Simpson, Bank House, Whitburn, West Lothian.

Granted 1933.

3rd (Alternate) Year—GRANT OF £12.

21. TIRREE AGRICULTURAL SHOW SOCIETY.

*Convener*—Malcolm M'Lean, J.P., Kirkapoll, Tirree.

*Secretary*—William G. Macdiarmid, Island House, Tirree.

Granted 1932. (Grants in abeyance 1932 and 1935—no Shows held.)

22. CENTRAL BANFFSHIRE FARMERS' CLUB.

*Convener*—George A. Morrison, Botary Mains, Cairnie, Huntly.

*Secretary*—John C. Gray, North of Scotland Bank Buildings, Moss Street, Keith.

Granted 1933. (Grant in abeyance 1935, on account of Aberdeen Show.)

23. NORTHERN COUNTIES AGRICULTURAL SOCIETY.

*Convener*—John Mackenzie, Balmair, Conon Bridge.

*Secretary*—R. T. W. Wilson-Anderson, Solicitor, Dingwall.

Granted 1934.

24. STEWARTRY AGRICULTURAL SHOW.

Promoted by the St Mary's Isle Agricultural Society, the Dalbeattie Agricultural Society, and the Gatehouse District Agricultural Society.

*Convener*—Commander D. Herries Maxwell of Munches, Kilquhanity House, Dalbeattie.

*Secretary*—J. E. Milligan, Clydesdale Bank Ltd., Dalbeattie.

Granted 1934.

25. DEESIDE AGRICULTURAL ASSOCIATION.

*Convener*—William H. Hector, Upper Anguston, Peterculter.

*Secretary*—David Humble, Dowalty, Crathes.

Granted 1934.

## 26. GARIOCH FARMER CLUB.

*Convener*—Major A. R. Leith of Petmathen, Oyne, Aberdeenshire.

*Secretary*—Alexander Watt, Cairnhill, Rothney, Inch.  
Granted 1934.

## 27. ROSSIE PRIORY AND DISTRICT AGRICULTURAL SOCIETY.

*Convener*—William L. Thoms, Benvie, Invergowrie.

*Secretary*—David M. Johnston, 71 High Street, Dundee.  
Granted 1934.

## 28. EAST OF FIFE AGRICULTURAL SOCIETY.

*Convener*—Lord Cochrane of Cults, Crawford Priory, Springfield, Fife.

*Secretary*—George M'Dougall, Commercial Bank of Scotland Ltd., Colinsburgh, Fife.  
Granted 1934.

## 29. NORTH UIST AGRICULTURAL SOCIETY.

*Convener*—Dr M. T. Mackenzie, Scolpaig, Lochmaddy.

*Secretary*—Peter Morrison, J.P., Sollas, Lochmaddy.  
Granted 1934.

## 2nd (Intermediate) Year—3 SILVER MEDALS.

## 30. STRATHOED AGRICULTURAL SOCIETY.

*Convener*—William Stirton, Gellybanks, Stanley.

*Secretary*—A. J. Bisset, Cairniehill, Bankfoot.

Granted 1933. (Grant in abeyance 1934; Grant in abeyance 1935—no Show held.)

## 31. INVERURIE AGRICULTURAL ASSOCIATION.

*Convener*—R. Laidlaw Smith of Pittodrie, Pitcaple.

*Secretary*—William R. Cockburn, Holm Cottage, Inverurie.  
Granted 1935.

## 32. STRATHDON AGRICULTURAL ASSOCIATION.

*Convener*—David D. Laurie, Estates Office, Strathdon, Alford.

*Secretary*—William M'Robert, Culfork, Strathdon, Alford.  
Granted 1935.

## 33. YTHANSIDE FARMERS' CLUB.

*Convener*—James Davidson, Milton, Ardlethen, Ellon.

*Joint-Secretaries*—William Watson and James Mutch, 20 The Square, Ellon, Aberdeenshire.  
Granted 1935.

## 34. CARRICK FARMERS' SOCIETY.

*Convener*—Thomas Smith, The Castle, Maybole.

*Secretary*—James M. Gibson, Royal Bank of Scotland, Maybole.

Granted 1935.

35. **ARRAN FARMERS' SOCIETY.**

*Convener*—James J. Morton, Machrie, Isle of Arran.

*Secretary*—Donald M'Allister, Clachaig, Kilmorie, Isle of Arran.

Granted 1935.

36. **NORTH OF FIFE FOAL SHOW SOCIETY.**

*Convener*—John Arbuckle, Lower Luthrie, Cupar, Fife.

*Secretary*—David Blair, Littleinch, Wormit, Fife.

Granted 1935.

37. **FETTERCAIRN FARMERS' CLUB.**

*Convener*—John Sim, Stoneydale, Laurencekirk.

*Secretary*—James Henry, Hatton Mains, Laurencekirk.

Granted 1935.

38. **BOTHWELL FARMERS' SOCIETY.**

*Convener*—James Russell, Townhead Farm, Holytown, Lanarkshire.

*Secretary*—James C. Osborne, Royal Bank of Scotland, Bellshill, Lanarkshire.

Granted 1935.

39. **BARRHEAD AGRICULTURAL SOCIETY.**

*Convener*—Robert H. Clark, Netherby, Barrhead.

*Joint Hon. Secretary*—J. H. Gibson, Clydesdale Bank Ltd., Barrhead.

Granted 1935.

40. **WEST TEVIOTDALE AGRICULTURAL SOCIETY.**

*Convener*—George Hedley, Howpasley, Hawick.

*Secretary*—James W. P. Amos, Northhouse, Hawick.

Granted 1935.

41. **EASTERN DISTRICT OF STIRLINGSHIRE AGRICULTURAL ASSOCIATION.**

*Convener*—George Steel, Mungall, Falkirk.

*Secretary*—Robert Waugh, Auction Mart, Falkirk.

Granted 1935.

1st Year—GRANT of £12.

42. **ISLAY, JURA, AND COLONSAY AGRICULTURAL ASSOCIATION.**

*Convener*—John G. Morrison of Islay, Islay House, Bridgend, Islay.

*Secretary*—Iain M. Mactaggart, Royal Bank of Scotland, Bowmore, Islay.

Granted 1936.

43. **MARNOCH AND CORNHILL AGRICULTURAL SOCIETY.**

*Convener*—George Mitchell, Midtown, Cornhill, Banffshire.

*Secretary*—William Gray, Mill of Park, Cornhill, Banffshire.

Granted 1936.

## 44. BUTE AGRICULTURAL SOCIETY.

*Convener*—Colin Campbell, Ascog Farm, Rothesay.*Secretary*—James M. Matheson, County Buildings, Rothesay.  
Granted 1936.

## 45. GLENKENS AGRICULTURAL SOCIETY.

*Convener*—Lord Sinclair, Milton Park, Dalry, Kirkcudbrightshire.*Secretary*—J. M. Garmory, Pomona Terrace, New Galloway, Kirkcudbrightshire.  
Granted 1936.

## 46. DALSERF FARMERS' SOCIETY.

*Convener*—Joseph Goulding, Dalpatrick, Carluke.*Secretary*—Robert Milligan, Summerhill Avenue, Larkhall.  
Granted 1936.

## 47. YARROW AND ETTRICK PASTORAL SOCIETY.

*Convener*—David Mitchell, Kirkhope, Ettrick, Selkirk.*Secretary*—George Brunton, Harehead, Selkirk.  
Granted 1936.

## 48. STRATHENDRICK AGRICULTURAL SOCIETY.

*Convener*—R. A. Murray of Pirniehall, Drymen.*Secretary*—Robert Bilsland, 1 Turnbull Crescent, Burnbrae, Alexandria.  
Granted 1936.

## CLASS 2.

## HORSE ASSOCIATIONS—GRANTS OF £15 IN RESPECT OF STALLIONS ENGAGED FOR AGRICULTURAL PURPOSES.

## REGULATIONS, 1936.

1. The Highland and Agricultural Society will make Grants to Horse Associations and other Societies in different districts engaging Stallions for agricultural purposes. The total sum expended by the Highland and Agricultural Society in such Grants shall not exceed the sum of £210 in any one year.

2. The portion of the Grant to any one Association or Society shall not exceed the sum of £15 in any one year. It is intended that the Grant shall be used by the Association or Society for the purpose of enabling it to secure a better class of Stallion.

3. The Grant will be available only for Stallions which, for the year to which the Grant applies, are registered in the Register of Certified Draught Stallions published by the Department of Agriculture for Scotland. (For information regarding the Registration of Stallions, apply to the Secretary of the Department of Agriculture for Scotland, York Buildings, Queen Street, Edinburgh.)

4. The Grant will continue for three years provided the Association receiving the Grant shall hire a Registered Stallion in the two intermediate years.

5. In the event of a Horse not being engaged in any one year while the provisions of the Grant are in force, the Grant made by the Highland and Agricultural Society will cease.

6. RULES 2 (Committee and Convener), 10 (Reports), 11 (Time of Payment), 12 (Renewal of Grant), and 13 (Disposal of Applications) applicable to Class 1, shall be applicable to this Class.

### Grants in 1936.

#### 5th and Final Year—GRANT OF £15.

##### 1. SANDAY AGRICULTURAL ASSOCIATION.

*Convener*—W. Cowper Ward, Scar House, Sanday, Orkney.

*Secretary*—John Wallace, Prattsfauld, Sanday, Orkney.

Granted 1931. (Grant in abeyance 1931—postponed.)

##### 2. UPPER DONSDALE AGRICULTURAL SOCIETY.

*Convener*—James Strachan, New Mains, Glenkindie.

*Secretary*—Alexander Kellas, Hillockhead, Cushnie, Alford.

Granted 1932.

##### 3. UPPER NITHSDALE HORSE SOCIETY.

*Convener*—Charles W. Ralston, Holmhill, Thornhill, Dumfriesshire.

*Secretary*—W. M. Henderson, Solicitor, Thornhill, Dumfriesshire.

Granted 1932.

##### 4. WEST OF FIFE CLYDESDALE ENTIRE HORSE SOCIETY.

*Convener*—James Butters, Masterton, Dunfermline.

*Secretary*—Robert Jarvis, Crossford, Dunfermline.

Granted 1932.

##### 5. HOWE O' THE MEARNS HORSE-BREEDING SOCIETY.

*Convener*—James Anderson, Pitcarry, Inverbervie.

*Secretary*—Hugh Middleton, Drumsleed, Fordoun.

Granted 1932.

##### 6. KINROSS-SHIRE AGRICULTURAL SOCIETY.

*Convener*—William C. Hunter of Arngask, Glenfarg.

*Hon. Secretary*—J. A. Hepburn, M.R.C.V.S., Ardmohr, Milnathort.

Granted 1932.

##### 7. MORAY STOCK IMPROVEMENT SOCIETY.

*Convener*—James Royan, New Alves, Alves, Elgin.

*Secretary*—W. Rose Black, Solicitor, Elgin.

Granted 1932.

##### 8. SOUTH RONALDSHAY AND BURREAY HORSE-BREEDING AND STOCK IMPROVEMENT SOCIETY.

*Convener*—John Tomison, Halcro, South Ronaldshay, Orkney.

*Secretary*—George A. Ryrie, Hall of Herston, South Ronaldshay, Orkney.

Granted 1932.

#### 4th (Intermediate) Year—Grant in Abeyance.

##### 9. TIRRE AGRICULTURAL (HEAVY HORSE-BREEDING) SOCIETY.

*Convener*—William G. Macdiarmid, Island House, Tirie.

*Secretary*—Malcolm M'Lean, J.P., Kirkapoll, Tirie.

Granted 1933.



## 10. CENTRAL BANFFSHIRE FARMERS' CLUB.

*Convener*—George A. Morrison, Botary Mains, Cairnie, Huntly.

*Secretary*—John C. Gray, North of Scotland Bank Buildings, Moss Street, Keith.

Granted 1933.

## 11. CLACKMANNANSHIRE UNION AGRICULTURAL SOCIETY.

*Convener*—Robert M'Gee, Blackfaulds, Alloa.

*Secretary*—G. F. Piggott, 30 Dirlston Gardens, Alloa.

Granted 1933.

## 12. EAST OF FIFE ENTIRE HORSE SOCIETY.

*Convener*—Thomas Graham, Balone Farm, St Andrews.

*Secretary*—James Gray, Stravithie Mains, Stravithie.

Granted 1933.

3rd (Alternate) Year—GRANT OF £15.

## 13. VALE OF ALFORD AND ABERDEEN DISTRICT HORSE-BREEDING SOCIETY.

*Convener*—Colonel Harry Forbes, D.S.O., Montgarrie House, Alford.

*Secretary*—James Lawson, Baldyvin, Alford.

Granted 1934.

## 14. CAITHNESS HORSE-BREEDING ASSOCIATION.

*Convener*—George King, Langwell, Berriedale, Caithness.

*Secretary*—A. G. Doull, Lybster, Caithness.

Granted 1934.

2nd (Intermediate) Year—Grant in Abeyance.

## 15. CARSE AND DUNDEE DISTRICT STALLION SOCIETY.

*Convener*—William L. Thoms, Benvie, Invergowrie.

*Secretary*—Joseph Murray, Balruddery Farm, Invergowrie.

Granted 1935.

## 16. STRATHAVEN AND GLENLIVET HORSE-BREEDING ASSOCIATION.

*Convener*—James Macdonald, J.P., Auchdregnie, Tomnavoulin, Glenlivet.

*Secretary*—Charles Lindsay, J.P., Croughly, Tomintoul.

Granted 1935.

## 17. WALLS AND HOY AGRICULTURAL SOCIETY.

*Convener*—James Baillie, Snelsetter, Longhope, Walls, Orkney.

*Secretary*—William Sutherland, The Old Custom House, Longhope, Walls, Orkney.

Granted 1935.

## 18. BLACK ISLE HORSE-BREEDING SOCIETY.

*Convener*—Donald Gray, Balrailan Mains, Duncanston, Canon Bridge.

*Secretary*—James MacDonald, Brae Park, Duncanston, Canon Bridge.

Granted 1935.

1st Year—GRANT OF £15.

19. ELLON AND DISTRICT HORSE-BREEDING SOCIETY.

*Convener*—R. P. Ligertwood, J.P., Piltchie, Ellon, Aberdeenshire.

*Secretary*—James A. Ligertwood, Piltchie, Ellon, Aberdeenshire.

Granted 1936.

20. CENTRAL FORFARSHIRE HORSE-BREEDING SOCIETY.

*Convener*—James Scott, Bonnyton, Inverarity.

*Secretary*—Walter R. Findlay, Ochterlony Mains, Guthrie.

Granted 1936.

21. ROTHIMAY HORSE-BREEDING SOCIETY.

*Convener*—Alexander Stephen, Bruckles, Rothimay, Huntly.

*Secretary*—Alexander J. Walker, Woodside, Rothimay, Huntly.

Granted 1936.

22. WESTRAY HORSE-BREEDING SOCIETY.

*Convener*—William F. Brown, Breckowall, Westray, Orkney.

*Secretary*—Benjamin Bremner, Hilldevale, Westray, Orkney.

Granted 1936.

23. BUCHLYVIE AND VALE OF MENTEITH HORSE-BREEDING AND STOCK IMPROVEMENT SOCIETY, LTD.

*Convener*—Thomas Syme, J.P., Dundaff, Kippen.

*Secretary*—Miss M. M. Drysdale, 55 Colinton Road, Edinburgh.

Granted 1936.

CLASS 3.

LOCAL SOCIETIES—TWO SILVER MEDALS IN AID OF PREMIUMS.

REGULATIONS, 1936.

The Society, being anxious to co-operate with local Societies, will give a limited number of Silver Medals annually to Societies (but not concurrently if also in receipt of a Grant under Class 1), in addition to the Money Premiums offered by them, for—

1. Best Bull, Cow, or Heifer of any pure breed specified in Class 1.
2. Best Stallion or Mare of any pure breed specified in Class 1.
3. Best Tup or Pen of Ewes of any pure breed specified in Class 1.
4. Best Boar, Sow, or Breeding Pig of any pure breed.
5. Best Pens of Poultry.
6. Best Sample of any variety of Wool.
7. Best Sample of any variety of Seeds.
8. Best-managed Farm.
9. Best-managed Green Crop.
10. Best-managed Hay Crop.
11. Best-managed Dairy.
12. Best Sweet-Milk Cheese.
13. Best Cured Butter.
14. Best Fresh Butter.
15. Best collection of Roots.

16. Best-kept Fences.
17. Best Sheep-Shearer.
18. Most expert Hedge-Cutter.
19. Most expert Labourer at Draining.
20. Best Maker of Oatcakes.

It is left to the local Society to choose out of the foregoing list the classes to which the Medals are to be allocated.

#### RULES OF COMPETITION.

1. All Competitions must be at the instance of a local Society.
2. The classes for which Medals are granted must be in accordance with the foregoing list. The Local Committee shall select the classes, and specify them in the Report.
3. The offer of the Medals must be announced in the Premium List and Catalogue of the Show as "presented by the Highland and Agricultural Society of Scotland."
4. The Medals are granted for two years, and lapse if not awarded in those years.
5. No Society shall receive more than two Medals in any year.
6. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society must be a member of the Highland and Agricultural Society of Scotland.
7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no provincial Show may be held in that district in the three months immediately preceding the date of the General Show. In the event of a Show being held, the entire grant will be cancelled.
8. The Money Premiums given in the District must be not less than £2 for each Medal offered.
9. The Medal for Sheep-Shearing shall always accompany the highest Money Premium.
10. There must not be fewer than three competitors in all the classes.
11. Regarding Reports and despatch of Medals, Rules 10 and 11, Class 1, will apply.
12. When a grant of Medals has expired, the Society cannot apply again for Medals for two years.

#### Grants in 1936.

##### 2nd Year.

1. CROMAR, UPPER DEE, AND DONSIDER AGRICULTURAL ASSOCIATION.

*Convener*—Patrick Strachan, East Town, Tarland, Aberdeenshire.

*Secretary*—R. A. M'Connachie, North Bank House, Tarland, Aberdeenshire.

Granted 1935. (2 Medals.)

2. DUNBARTONSHIRE AGRICULTURAL SOCIETY.

*Convener*—James R. Lumsden of Arden, Dunbartonshire.

*Secretary*—George Lawrence, Union Bank of Scotland Ltd., Dunbarton.

Granted 1935. (2 Medals.)

## 1st Year.

## 3. LOCKERBIE AGRICULTURAL SOCIETY.

*Convener*—R. Jardine Paterson of Balgray, Lockerbie.*Secretaries*—Henderson & Mackay, Solicitors, Lockerbie.

Granted 1936. (2 Medals.)

## 4. CARNWATH AGRICULTURAL SOCIETY.

*Convener*—Andrew S. Lawson, Guildhouse, Forth.*Secretary*—A. M. White, Commercial Bank of Scotland Ltd., Carnwath.

Granted 1936. (2 Medals.)

## 5. MOULIN AGRICULTURAL ASSOCIATION.

*Convener*—William Donaldson, Fonab Farm, Pitlochry.*Secretary*—Buckham W. Liddell, W.S., Pitlochry.

Granted 1936. (1 Medal.)

## 6. KILMACOLM AND PORT-GLASGOW AGRICULTURAL SOCIETY.

*Convener*—J. Graham Kerr, Alderwood, Port-Glasgow.*Secretary*—Thomas Russell, Royal Bank of Scotland, Kilmacolm.

Granted 1936. (2 Medals.)

## 7. BLACK ISLE FARMERS' SOCIETY.

*Convener*—R. M'Iver, Wester Raddery, Avoch.*Secretary*—F. Scott, Rosenberg, Cromarty.

Granted 1936. (2 Medals.)

## CLASS 4.

## SPECIAL GRANTS—1936.

## (1) ANNUAL.

## 1. AYRSHIRE AGRICULTURAL ASSOCIATION, £20, to be competed for at the Dairy Produce Show at Kilmarnock.

*President*—Lord Rowallan, M.C., Rowallan, Kilmarnock.*Convener of Dairy Show Committee*—William M'Fadzean, 35 Dundonald Road, Kilmarnock.*Secretary*—James A. Paterson, 17 Kyle Street, Ayr.

Granted 1872.

## 2. BRITISH DAIRYMAIDS' ASSOCIATION.

*Hon. President*—Mrs William Meiklem, Bennoch Park, Kirkcaldy.*President*—Miss G. Lewis, N.D.D., Rose Terrace, Perth.*Hon. Secretary*—Mrs D. G. More, 16 Rutland Square, Edinburgh 1.

1 Minor Gold Medal and 1 Medium Silver Medal for Champion Buttermaking Competitions at the Scottish National Fat Stock Club Show, Edinburgh.

Granted 1908.

## 3. NORTHERN COUNTIES ARTS AND CRAFTS SOCIETY, £20.

*Convener*—Miss Mackintosh of Raigmore, Raigmore, Inverness.*Joint-Secretaries*—Mrs Mitford, Berryfield, Lentrane, and Miss Ruth Mackintosh, Raigmore, Inverness.

Granted 1922.

## 4. NORTH OF SCOTLAND COLLEGE OF AGRICULTURE.

*Secretary*—A. A. Prosser, Crown Mansions, 41½ Union Street, Aberdeen.

3 Silver Medals (1 Large, 1 Medium and 1 Minor)—1st, 2nd and 3rd Prizes respectively—for *Sir John Fleming Cup* Stackyard Competition.

Granted 1925.

## 5. SCOTTISH NATIONAL UNION OF ALLOTMENT HOLDERS.

*Secretary and Treasurer*—Archibald W. Fisher, Solicitor, 18 Hill Street, Edinburgh.

£15 and 15 Medium Silver Medals for best Allotments.

Granted 1927.

## 6. GALLOWAY DAIRY PRODUCE SHOW SOCIETY, £12, to be competed for at the Dairy Produce Show at Castle-Douglas.

*Convener*—Bailie A. M. Macfarlane, 183 King Street, Castle-Douglas.

*Secretary*—Patrick Gifford, Royal Bank Offices, Castle-Douglas.

Granted 1936.

## (2) IN ALTERNATE YEARS.—GRANTS IN 1936.

## 7. ROUSAY AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—R. S. Mainland, Nearhouse, Rousay, Orkney.

*Secretary*—John Linklater, Blossom, Sourin, Rousay, Orkney.

Granted 1903.

## 8. SOUTH RONALDSHAY AND BURRAY AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—John Omand, Hall of Hoxa, St Margaret's Hope, Orkney.

*Secretary*—George S. Esson, St Margaret's Hope, Orkney.

Granted 1904.

## 9. SHAPANSEY AGRICULTURAL ASSOCIATION, ORKNEY, £3.

*Convener*—William T. Wood, Balfour Mains, Shapansey, Orkney.

*Secretary*—D. L. Kemp, Bayview, Shapansey, Orkney.

Granted 1934.

## (3) IN ALTERNATE YEARS.—GRANTS IN ABEYANCE, 1936.

## 10. ORKNEY AGRICULTURAL SOCIETY, £3.

*Convener*—George Learmonth, Pow, Sandwick, Orkney.

*Joint-Secretaries*—D. Flett and J. C. Croy, Junction Road, Kirkwall.

Granted 1883.

## 11. EAST MAINLAND AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—William G. Smith, Hall of Tankerness, Tankerness, Orkney.

*Secretary*—Alfred C. Tait, Quoyburray, Tankerness, Orkney.

Granted 1898.

12. WEST MAINLAND AGRICULTURAL SOCIETY, ORKNEY, £3.  
*Convener*—Peter H. Johnston, Dale, Evie, Orkney.  
*Secretary*—James Wood, Garson, Sandwick, Orkney.  
 Granted 1900.
13. SANDAY AGRICULTURAL ASSOCIATION, ORKNEY, £3.  
*Convener*—W. Cowper Ward, Scar House, Sanday, Orkney.  
*Secretary*—John Wallace, Prattsfauld, Sanday, Orkney.  
 Granted 1902.
14. YELL AGRICULTURAL SOCIETY, SHETLAND, £3.  
*Convener*—T. R. Manson, Ladybank, West Sandwick,  
 Lerwick.  
*Secretary*—Robert Johnston, The Manse, West Sandwick,  
 Lerwick.  
 Granted 1931.

### CLASS 5.

#### FEDERATIONS OF SCOTTISH WOMEN'S RURAL INSTITUTES—GRANTS OF £10.

##### REGULATIONS, 1936.

1. A sum not exceeding £150 in each year will be given in special Grants to Federations of Scottish Women's Rural Institutes. The amount of the Grant to a Federation shall not exceed £10 per annum.
2. A Federation which has received a Grant for two consecutive years shall not be eligible to apply for a renewal of the Grant until after the expiry of two years.

#### Grants in 1936.

##### 2nd Year.

1. Ayrshire Federation.  
*Convener*—Mrs Kennedy, Doonholm, Ayr.  
*Secretary*—Miss Montgomerie, M.B.E., Dalmore, Stair,  
 Mauchline.  
 Granted 1935.
2. Banffshire Federation.  
*Convener*—Mrs Gordon, Buchrumb, Dufftown.  
*Secretary*—Miss G. S. Chalmers, Gowanlea, Aberchirder,  
 Huntly.  
 Granted 1935.
3. Berwickshire Federation.  
*Convener*—Mrs Stevenson, Blackburn, Lauder, Berwickshire.  
*Secretary*—Miss A. M'B. Cowan, Oxtou, Berwickshire.  
 Granted 1935.
4. Dumfriesshire Federation.  
*Convener*—Lady Milne Home, Irvine House, Canonbie.  
*Secretary*—Mrs Forrester, Kilness, Dumfries.  
 Granted 1935.
5. Kincardineshire Federation.  
*Convener*—Mrs Cox, Inchmarlo, Banchory.  
*Secretary*—Mrs Whimster, Rosehill House, Montrose.  
 Granted 1935.

## 6. LANARKSHIRE FEDERATION.

*Convener*—Mrs Douglas, Auchlochan, Lesmahagow.

*Secretary*—Miss G. Russell, The Millhouse, Cleghorn, Lanark.  
Granted 1935.

## 7. MID AND WEST LOTHIAN FEDERATION.

*Convener*—Mrs Mercer, Southfield, Dalkeith.

*Secretary*—Miss N. Scott Muir, 7 Barnton Gardens, Davidson's  
Mains, Edinburgh.  
Granted 1935.

## 8. MULL FEDERATION.

*Convener*—Mrs Murray Guthrie, Torosay Castle, Isle of Mull.

*Secretary*—Mrs Cunninghame, Gruline, Isle of Mull.  
Granted 1935.

## 9. ROSS-SHIRE FEDERATION.

*Convener*—The Lady Marjory Mackenzie, Conon House,  
Conon Bridge.

*Secretary*—Mrs Macpherson, Elsie, Strathpeffer.  
Granted 1935.

## 10. STEWARTRY FEDERATION.

*Convener*—Mrs Grierson, Balig, Dunrod, Castle Douglas.

*Show Secretary*—Mrs Picken, Torrs, Kirkcudbright.  
Granted 1935.

## 11. WIGTOWNSHIRE FEDERATION.

*Convener*—Mrs Graham, Monreith, Whauphill, Wigtownshire.

*Secretary*—Miss Sowerby-Niven, Fairseat, Sorbie, Wigtown-  
shire.  
Granted 1935.

## 1st Year.

## 12. RENFREWSHIRE FEDERATION.

*Convener*—The Lady Alice Shaw-Stewart, Ardgowan, Inver-  
kip, Renfrewshire.

*Secretary*—Mrs Scott, Alexandra Place, Inverkip, Renfrew-  
shire.

Granted 1935. (Grant in abeyance 1935—postponed.)

## 13. ABERDEENSHIRE FEDERATION.

*Convener*—Mrs Argo, M.A., Tillymaud, Udney.

*Secretary*—Miss Helen D. Ross, 25 Crown Street, Aberdeen.  
Granted 1936.

## 14. BUTE, ISLE OF, FEDERATION.

*Convener*—Mrs Constable, The Foley, Rothesay.

*Secretary*—Miss Marjory Gray Buchanan, Ettrickdale, Port  
Bannatyne, Isle of Bute.

Granted 1936.

## 15. FIFE FEDERATION.

*Convener*—The Countess of Elgin, Broomhall, Dunfermline.

*Secretary*—Mrs Wood, The Cottage, Thornton, Fife.

Granted 1936.

## GROUP III.—COTTAGES AND GARDENS, &amp;c.

The following Premiums are offered for Competition.  
The Premiums are granted for two years.

## CLASS 6.

## GRANTS FOR BEST-KEPT COTTAGES AND GARDENS.

1. Best-kept Cottage	.	.	.	.	.	.	£1	0	0
Second best	.	.	.	.	.	.	0	10	0
2. Best-kept Cottage Garden	.	.	.	.	.	.	1	0	0
Second best	.	.	.	.	.	.	0	10	0

*Forms of application may be obtained from the Secretary, and should be completed and returned on or before 1st November next, in respect of a Grant commencing in the following year.*

## RULES OF COMPETITION.

1. Competitions may take place in the different parishes for Cottages and Gardens, or for either separately.

2. The occupiers of Lodges at Gentlemen's Approach Gates and Gardeners' Houses are excluded, as well as others whom the Committee consider, from their position, not to be entitled to compete. The inspection must be completed by the 1st of October. In making the inspection, the Conveners may take the assistance of any competent judges.

3. It shall be left to the Committee in the District to fix two grades of Cottages, with maximum rents of £10 and £16 respectively, and to apply for £3 Grants in respect of each.

4. To warrant the award of full Premiums, there must not be fewer than three Competitors in each class. If there are less than three competitors in each class, only half Premium will be awarded.

5. A person who has gained the highest Premium cannot compete again.

6. If the Cottage is occupied by the proprietor, the roof must be in good repair; if the roof is thatch, it must be in good repair, though in the occupation of a tenant. The interior and external conveniences must be clean and orderly; the windows must be free of broken glass, clean, and affording the means of ventilation. Dunghills, and all other nuisances, must be removed from the front and gables. In awarding the Cottage Premiums, preference will be given to Competitors who, in addition to the above requisites, have displayed the greatest taste in ornamenting the exterior of their houses, and the ground in front and at the gables.

7. In estimating the claims for the Garden Premiums, the judges should have in view—the sufficiency and neatness of the fences and walks; the cleanness of the ground; the quality and choice of the crops; and the general productiveness of the garden.



8. Reports, stating the number of Competitors, the names of successful parties, and the nature of the exertions which have been made by them, must be lodged with the Secretary of the Highland and Agricultural Society *on or before the 1st November next.*

9. When a grant of Money has expired, the District cannot apply again for aid for four years.

### Grants in 1936.

#### 2nd Year.

##### 1. NORTH UIST AGRICULTURAL SOCIETY.

*Convener*—Dr M. T. Mackenzie, Scolpaig, Lochmaddy.

*Secretary*—Peter Morrison, J.P., Sollas, Lochmaddy.

Granted 1935.

##### 2. SPRINGSIDE HORTICULTURAL AND AGRICULTURAL ASSOCIATION.

*Convener*—Alexander Johnston, Springside Schoolhouse, Kilmarnock.

*Secretary*—William Williamson, 21 Springhill Terrace, Spring-side, Kilmarnock.

Granted 1935.

#### 1st Year.

##### 3. TORPHINS HORTICULTURAL AND INDUSTRIAL SOCIETY.

*Convener*—Andrew Reid, The Square, Torphins, Aberdeenshire.

*Secretary*—Edward Malcolm, Woodville, Torphins, Aberdeenshire.

Granted 1936.

##### 4. BENBECULA HORTICULTURAL SOCIETY.

*Convener*—Mrs Paterson, Sorelle Lodge, Benbecula, South Uist.

*Secretary*—John Macmillan, Fernfield, Benbecula, South Uist.

Granted 1936.

### CLASS 7.

#### MEDALS FOR BEST-KEPT COTTAGES AND GARDENS, GARDEN PRODUCE, POULTRY, AND HONEY.

##### RULES OF COMPETITION.

1. The Society will give annually one or two Minor Silver Medals to a limited number of local Associations or individuals, who establish Competitions and Premiums for Cottages, Gardens, Garden Produce, or Bee-Keeping. The Medals will be granted for two years.

2. The Medals may be offered in any two of the following sections, *but under no circumstances will the two Medals be given in one of the sections :—*

- (1) Best-kept Cottage or best-kept Cottage and Garden. (One Medal only.)
- (2) Best-kept Garden. (One Medal only.)
- (3) Best Collection of Garden Produce—Flowers excluded. (One Medal only.)
- (4) Best Pen of Poultry. (One Medal only.)
- (5) Honey. (One Medal only.)

3. The annual value of each cottage, with the ground occupied in the parish by a Competitor, must not exceed £20. The occupiers of Lodges at Gentlemen's Approach Gates, and Gardeners in the employment of others, are not entitled to compete.

4. If Competition takes place for Garden Produce, such produce must be *bona fide* grown in the Exhibitor's Garden. He will not be allowed to make up a collection from any other Garden. The produce must consist of Vegetables, or Vegetables and Fruit (not Fruit alone). Flowers are excluded.

5. The Honey must be the produce of the Exhibitor's own Hives.

6. To warrant the award of a Medal, there must not be fewer than three Competitors.

7. Forms of Report of Competitions will be furnished to the Secretaries in the different Districts. These must, in all details, be completed and lodged with the Secretary of the Highland and Agricultural Society as soon as possible after the Competition, and in no case later than *1st November*, for the approval of the Directors, against whose decisions there shall be no appeal.

8. If no Competition takes place in a District for two years the grant expires.

9. When a grant of Medals has expired, the District cannot apply again for aid for two years.

### Grants in 1936.

#### 2nd Year.

##### 1. SPRINGSIDE HORTICULTURAL AND AGRICULTURAL ASSOCIATION.

*Convener*—Alexander Johnston, Springside Schoolhouse, Kilmarnock.

*Secretary*—William Williamson, 21 Springhill Terrace, Spring-side, Kilmarnock.

Granted 1935 (2 Medals).

#### 1st Year.

##### 2. TORPHINS HORTICULTURAL AND INDUSTRIAL SOCIETY.

*Convener*—Andrew Reid, The Square, Torphins, Aberdeenshire.

*Secretary*—Edward Malcolm, Woodville, Torphins, Aberdeenshire.

Granted 1936. (2 Medals.)

##### 3. BENBECULA HORTICULTURAL SOCIETY.

*Convener*—Mrs Paterson, Sorelle Lodge, Benbecula, South Uist.

*Secretary*—John Macmillan, Fernfield, Benbecula, South Uist.

Granted 1936. (2 Medals.)

## GROUP IV.—PLOUGHING, HOEING, AND LONG FARM SERVICE.

### 1. MEDALS FOR PLOUGHING COMPETITIONS.

The Ploughing Medal will be given to the winner of the first Premium at Ploughing Competitions, provided a Report in the following terms on the official form is made to the Secretary, within one month of the Competition, by a Member of the Society. Forms of Report to be had on application.

#### FORM OF REPORT.

I, \_\_\_\_\_ of \_\_\_\_\_, Member of the Highland and Agricultural Society, hereby certify that I attended the Ploughing Match of the \_\_\_\_\_ Association at \_\_\_\_\_ in the county of \_\_\_\_\_ on the \_\_\_\_\_ when \_\_\_\_\_ ploughs competed; \_\_\_\_\_ of land were assigned to each, and \_\_\_\_\_ hours were allowed for the execution of the work. The sum of £ \_\_\_\_\_ was awarded as follows:—

*[Here enumerate the names and designations of successful Competitors.]*

#### RULES OF COMPETITION.

1. All Matches must be at the instance of a Local Society or Ploughing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of the Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All reports must be lodged within one month of the date of the Match, and certified by a Member of the Highland and Agricultural Society who was present at it.

5. A Member can report only one Match; and a Ploughman cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal, there must have been 12 Ploughs in actual competition for the medal (*i.e., in the particular class for which the medal was offered*) and not less than £3 awarded in Prizes by the Local Society. The Medal to be given to the winner of the first prize.

7. The Local Society or Ploughing Association shall decide what class of ploughs shall compete for the Medal, and if so agreed, may offer it for competition to the class of plough most generally in use in the district.

8. The Local Society or Committee may, if they desire, arrange to let each Ploughman have one person to guide the horses for the first two and the last two furrows, but in no case shall Ploughmen receive any other assistance, and their work must not be set up or touched by others. Attention should be given to the firmness and sufficiency of the work below, more than to its neatness above the surface.

9. The Local Committee is required to fix the time to be allowed for ploughing the portion of land, and they are recommended that the time be at the rate of not more than fourteen hours per imperial acre on light land, and eighteen hours on heavy or stony land.

NOTE.—The attention of the Directors of the Society has frequently been drawn to certain irregularities which have occurred in connection with the conduct of Ploughing Matches and the completion of the Reports thereon. Complaints have been made (a) that the allotted amount of ground has not been ploughed, within the specified time, by the competitor awarded the first prize; (b) that the Report sent to this Society has been signed by a Member of the Society who was not present at the Match. It has to be pointed out that any infringement of the above Rules by a Local Society or Ploughing Association will render that Society or Association liable, at the discretion of the Board of Directors, to be debarred from receiving the Society's Medals.

## 2. MEDALS FOR HOEING COMPETITIONS.

The Minor Silver Medal will be given to the winner of the first Premium at Hoeing Competitions, provided a Report on the official form is made to the Secretary within a month of the Competition by a Member of the Society. Forms of Report to be had on application.

### RULES OF COMPETITION.

1. All Matches must be at the instance of a Local Society or Hoeing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of the Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All reports must be lodged within one month of the date of the Match, and certified by a Member of the Highland and Agricultural Society who was present at it.

5. A Member can only report one Match; and same Competitor cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal there must have been twelve hoes in Competition, and not less than Three Pounds awarded in prizes by the Local Society or Association. The Medal to be given to the winner of the first prize.

7. The time to be allowed to be decided by the local Committee, but in no case to exceed two hours for two drills of 100 yards each, the third drill being unoccupied, so that Competitors do not interfere with their neighbour's work.

8. Competitors must finish their work as they go along—no turning back or after-dressing allowed. Hand-picking or transplanting shall be strictly prohibited.

9. A Committee shall be appointed to watch the work, and any Competitor found transplanting or otherwise not complying with the Rules shall have his number withdrawn, and be debarred from receiving any prize which might otherwise have been awarded to him.

NOTE.—Medals will be awarded under similar conditions for Competitions in hand-singling.

### 3. CERTIFICATES AND MEDALS FOR LONG FARM SERVICE.

Certificates and Silver Medals for long service will be awarded by the Society to farm servants, male or female, having an approved service in Scotland of not less than thirty years (not necessarily continuous) —(a) with one employer on the same or different holdings ; (b) on the same holding with different employers.

Special Certificates and Gold Medals are also awarded to farm servants, male or female, having an approved service in Scotland of not less than forty-five years (not necessarily continuous), on similar conditions of employment as the above.

Forms of Application are obtainable from the Secretary, 8 Eglinton Crescent, Edinburgh.

War Service to count towards the time required for qualification, where farm servants have returned to same service or employment with same farmer or his family.

Estate workers, such as Foresters, Carters, Grooms, &c., are not eligible. The award is strictly confined to Farm workers, such as Ploughmen, Shepherds, &c.

**NOTE.—From 16th to 25th June all communications for the Secretary should be addressed to him at the Secretary's Office, Showyard, Melrose.**

*Address for Telegrams*—"SOCIETY," EDINBURGH.

*Telephone No* —EDINBURGH 23655.

# HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

## GENERAL SHOW OF STOCK, IMPLEMENTS MACHINERY, ETC.

### MELROSE

23RD, 24TH, 25TH, AND 26TH JUNE 1936.

#### *LAST DAYS OF ENTRY.*

IMPLEMENTS AND OTHER ARTICLES—Monday, 6th April.

NEW IMPLEMENTS—Monday, 6th April.

FLOWER SHOW—Saturday, 25th April.

CATTLE, HORSES, SHEEP, GOATS, AND PIGS—Wednesday, 29th April.

*(Separate Form for EACH Entry.)*

DAIRY PRODUCE, RURAL INDUSTRIES, AND HORSE-SHOEING AND  
SHOE-MAKING—Wednesday, 29th April.

POULTRY AND EGGS—Wednesday, 13th May.

LIVE STOCK JUDGING COMPETITION—Thursday, 14th May.

HONEY—Thursday, 21st May.

BUTTERMAKING COMPETITIONS—Thursday, 28th May.

BACON PIG COMPETITION—Thursday, 28th May.

#### *President of the Society.*

THE DUKE OF BUCCLEUCH AND QUEENSBERRY, G.C.V.O

#### *Chairman of the Board of Directors.*

ROBERT MACMILLAN OF HOLM OF DALQUHAIRN, WOODLEA,  
MONIAIVE.

#### *Convener of the Local Committee.*

MAJOR S. STRANG STEEL OF PHILIPHAUGH, SELKIRK.

#### *Convener of the Shows Committee.*

MAJOR ROBERT W. SHARPE, OF THE PARK, EARLSTON.

The District connected with the Show comprises the Counties of Berwick,  
Peebles, Roxburgh, and Selkirk.

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## REGULATIONS.

### GENERAL CONDITIONS.

1. The Competition, except where otherwise stated in the Premium List, is open to Exhibitors from all parts of Great Britain, Northern Ireland, and Irish Free State.

2. Every Lot must be intimated by a Certificate of Entry, lodged *Entries.* with the Secretary not later than Monday, 6th April, for Implements, New Implements, and other Articles; Saturday, 25th April, for Flower Show; Wednesday, 29th April, for Stock, Dairy Produce, Rural Industries, and Horse-shoeing and Shoe-making; Wednesday, 13th May, for Poultry and Eggs; Thursday, 14th May, Live Stock Judging Competition; Thursday, 21st May, for Honey; Thursday, 28th May, for Buttermaking Competitions and Bacon Pig Competition. Printed forms of Entry will be issued on application to the Secretary, No. 8 Eglinton Crescent, Edinburgh 12. Admission Orders for Exhibits and Attendants will be forwarded to Exhibitors, by post, previous to the Show.

Between 29th April and 28th May an Exhibitor who has made, in due time, an entry of Horses, Cattle, Sheep, Goats, or Pigs, in a particular class, will be permitted to substitute for it an entry of another animal in the *same class* on payment of a fee of Five Shillings each entry. *Substitution of Entry in same Class.*

3. This Premium List is published and the Show will be held subject to any Orders that may be issued by the Ministry of Agriculture or Local Authorities. Any licences that may be required for the movement of Stock into or away from the Show must be obtained by Exhibitors. For these licences application should be made to the Chief Constable, Jedburgh. *Licences for moving Stock.*

4. Animals suffering from any form of infectious or contagious disease—including ringworm or other form of infectious or contagious skin ailment—must not be brought to the Show. Those infringing this Rule shall be liable to a fine of 40s., and to have their Stock removed. *Diseased Animals.*

The Steward of Horses shall have power to require that any animal showing symptoms of cold be examined by the Veterinary Surgeon, and, if found to be so suffering, the animal shall be isolated or excluded from the Showyard. *Horses suffering from cold.*

5. No Entry can be received or recorded unless it is accompanied by the necessary fees, and complies fully with the Regulations in the Premium List, the Secretary being empowered to return entries sent without the necessary fees. *Fees to accompany Entries.*

6. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor. The Society shall have power at any time to call upon an Exhibitor to furnish proof of the correctness of any statement in his entry. *Particulars of Entries.*

7. The name of the Breeder, if known, must be given, and if the Breeder is not known, a declaration to that effect, signed by *Name of Breeder.*



- the Exhibitor, must be made on the Entry Schedule, and no pedigree will be entered in the Catalogue when the Breeder is unknown.
- No Substitution of Animals.* 8. All animals, except calves, foals, and lambs shown with their dams, must be entered in the classes applicable to them, and cannot be withdrawn after entry, or other animals be substituted in their place, except as provided in Rule 2.
- One Class only.* 9. For Prizes given by the Society, no animal shall be allowed to enter in more than one class, or to compete in any class except that prescribed for animals of its pedigree and description; but this Rule does not apply to the Jumping Classes.
- Ownership.* 10. All stock exhibited at the Show, except where otherwise stated in the Premium List, must be, at the time of entry, the *bona fide* property of the Exhibitor in whose name it is entered.
- Responsibility for Entries.* 11. Exhibitors are alone responsible for the accuracy and eligibility of their entries. The recording of an entry or the admission of the exhibit to the Showyard will not relieve the Exhibitor of this responsibility. The entry fee paid for an animal entered in a class for which it is not eligible is not returnable.
- Cancelling of Entries.* 12. In the event of the entries in any section of Cattle, Horses, Sheep, Goats, or Pigs being less in number than an average of three per class, or the number of different Exhibitors in the section being less than three, the classes for that section shall be cancelled automatically for the year and the entry fees returned.
- Society not liable.* 13. The Society shall not be liable for any loss or damage which Stock, Poultry, Dairy Produce, &c., Implements, or other articles may sustain at the Show, or in transit.
- Disqualified Exhibitors.* 14. The Society reserve to themselves the right of refusing, cancelling, or prohibiting the exhibition of entries from any person who, after 1st January 1904, has been expelled from the membership of any Agricultural or Dairy Society, or who may have been prohibited, suspended, or disqualified from making entries or exhibiting at the Show or Shows of any Agricultural or Dairy Society or Breed Society in consequence of having attempted to obtain a Prize by giving a false Certificate, or by other unfair means, or who is under exclusion from any Breed Society for fraudulent practices.
- Animal Disqualified.* 15. When an animal has previously been disqualified by the decision of any Agricultural or Breed Society in the United Kingdom, such disqualification shall attach, if the Exhibitor, being aware of the disqualification, fail to state it, and the grounds thereof, in his entry, to enable the Directors to judge of its validity.
- Tampering with Animals.* 16. Any artificial contrivance or device of any description found on or proved to have been used on an animal, either for preventing the flow of milk or for any other improper purpose, will disqualify that animal from being awarded a Premium, and the Owner of said animal may be prohibited from again entering Stock for any of the Society's General Shows, for such a period as the Directors may see fit.
- Blindfolding Horses.* 17. Horses shall not be blindfolded while being shown in the Ring.
- Rejecting Entries.* 18. The Society further reserve to themselves the right of refusing any entries they may think fit to exclude, or to cancel any entry made, or to prohibit the exhibition of any entry.
- Control of Exhibits.* 19. Stock entered for competition, and actually in the Show, is subject to the control and under the orders of the Stewards, Secretary, and other Show officials of the Society, and such stock may not be withdrawn from competition without the consent of the Stewards or Secretary.

20. Persons making insulting remarks to, or in any way unduly interfering with, the Judges, Stewards, or other officials while in the performance of their duties, and all Exhibitors or others in charge of stock while in the Judging Rings refusing to accept or display tickets, rosettes, &c., awarded by the Judges, and handed to them by the Stewards or other officials, or tearing up tickets, rosettes, &c., so awarded and handed to them, or indulging in any similar conduct, shall be considered guilty of misconduct, and shall be dealt with under these rules. *Improper Conduct.*

21. All persons in charge of stock or other exhibits, and all persons admitted into the Showyard, shall be subject to the rules of the Society, and shall obey the orders of the Stewards, Secretary, and other officials of the Society. Exhibitors shall be answerable for the conduct of their servants or representatives. *Subject to Orders.*

The Stewards and other officials have power to enforce the Regulations of the Society in their different departments. *Power of Officials.*

22. A protest having reference to exhibits at the Show may be lodged by any person having interest. Protests having reference to competitions which take place on the first day of the Show must be lodged in writing with the Secretary at his Office in the Showyard not later than 9 A.M. on Wednesday, the second day of the Show, and parties must be in attendance at the Secretary's Office in the Showyard at 9.30 A.M. that day, when protests may be disposed of. Protests relating to competitions taking place after the first day of the Show must be lodged before 5 P.M. on the day on which the particular exhibition takes place. Each protest must state specifically the grounds of objection, and must be accompanied by a deposit of £2, 2s., which deposit may, if the objection be proved frivolous to the satisfaction of the Directors, be forfeited. Protests may be lodged at any time by Directors, and in this case no deposit will be required. Protests will be heard and determined by the Directors. Protests on veterinary grounds not received. *Protests.*

23. The violation of any one of the Regulations, or disobedience of the orders of the Directors, Stewards, Secretary, or other officials of the Society, shall render the offending person liable to the forfeiture of all Premiums awarded to him, or of such a portion as the Directors may ordain, and also liable to be expelled from the membership of the Society, and disqualified from again, or for a certain number of years, exhibiting at the Shows of the Society, or to have his case disposed of by fine or otherwise as the Directors may determine. *Penalties for Offences.*

24. The decision of the Directors shall, in every matter arising at or in connection with the Show, be final; and every person present at the Show, whether as a Judge, Exhibitor, Visitor, or otherwise, shall be deemed thereby to have agreed to refer the subject-matter of such decision to the final determination of the Directors to the exclusion of all Courts of Law. *Final Authority.*

25. All decisions under these Rules may, along with the names and addresses of the persons against whom such decisions have been pronounced, be communicated by the Secretary of this Society to the Secretaries of all Agricultural or Dairy Societies holding open Shows in the United Kingdom, and to the Secretaries of all Breed Societies in the United Kingdom, and may be published in the Annual Reports of this Society, and in such newspapers or journals as the Directors may determine; and every Exhibitor competing at the Show, and every person present at the Show, whether as a Director, Member of Committee, Steward, Judge, Exhibitor, Visitor, or otherwise, shall *Intimating Decisions.*

be deemed thereby to have consented to such communication and publication.

*Former  
Winners  
as Extra  
Stock.*

26. An animal to which a first Premium has been awarded, even if it should not qualify for that Premium, or an animal which subsequently becomes entitled to a first Premium, at a General Show of the Society, cannot again compete in the same class, notwithstanding any alteration in the heights stated for such class, but may be exhibited as Extra Stock (see page 128).

*Herd-  
books.*

27. Shorthorn, Dairy Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Highland, and British Friesian cattle must be entered in the herd-books—Ayrshire Cattle in the herd-book or any Appendices thereto—or the Exhibitor must produce evidence that his animal is eligible to be entered therein. Dun Galloways entered in the ordinary Galloway classes must be registered in, or eligible for entry in, the Galloway Cattle Society's herd-book.

*Heights of  
Horses.*

28. All Horses or Ponies entered in classes in which a particular height is stated shall, before being judged, be measured with their shoes on. No subsequent measuring or alteration of shoes will be permitted. In the case of Highland and Western Island Ponies, these may be measured without shoes, the height limit in such cases being reduced by quarter of an inch.

*Weight of  
Shoes.*

29. Exhibitors of Hackney and Harness Horses shall be required to adhere to the Rules and Regulations of the Hackney Horse Society with regard to the weight of shoes on their exhibits, the Society's Veterinary Inspector being instructed to examine all the Hackneys and Harness Horses on the second morning of the Show and see that the following Rules as to the weight of shoes are attended to—viz., (a) For Hackneys exceeding 14 hands (except Hackney yearling colts and Hackney yearling fillies), no shoe (nails included) may exceed 2 lb. in weight; (b) for Ponies not exceeding 14 hands, Hackney yearling colts and Hackney yearling fillies, no shoe (nails included) may exceed 1½ lb. in weight.

*Overfeed-  
ing.*

30. Breeding Stock must not be shown in an improper state of fatness, and the Judges are requested not to award Premiums to overfed animals. No Cattle which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes until one year after being so shown, and then only with calf at foot. No Sheep which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes.

*Sires.*

31. Aged Bulls and Stallions must have had produce, and, along with two-year-old Bulls, three-year-old Colts, and two-shear and aged Tups, have served within the twelve months immediately preceding the Show.

*Calving  
Cows.*

32. Except as may be otherwise specially provided in this Premium List, cows of all breeds (other than Dairy Shorthorn, Ayrshire, and British Friesian) must have had a live or full-time calf on or after 1st September of the year preceding the year of the Show, and before the first day of the Show, and when exhibited must be in milk. Cows of the Dairy Shorthorn, Ayrshire, and British Friesian breeds must have had a live or full-time calf within fifteen months previous to the Show. *Animals of any age that have had a calf must be shown as Cows.*

*In-calf  
Heifers.*

33. Two-year-old Heifers of the Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Ayrshire, and British Friesian breeds, and three-year-old Highland Heifers, must be in calf when exhibited, and the Premiums will be withheld till birth be certified, which must be within nine months after the Show.

34. A Mare entered in a class for "Mares with foal at foot" must *Mares.* have produced a foal after 1st January of the year of the Show, must have regularly nursed her own or another foal, and must (except where otherwise provided) have the foal with her in the Show. If the mare's own foal is alive it must be the foal shown with the mare. In the case of a Mare that has not foaled before the Show, or whose foal has died, she shall, if not in milk, be eligible without further entry to compete among the Yeld Mares if a corresponding class for Yeld Mares be included in the Premium List. Draught Yeld Mares must produce a foal not later than 1st August of the year following the year of the Show. A Mare in a class for "Mares or Geldings" may or may not have had a foal in the year of the Show, but shall not have her foal exhibited with her, nor be in milk at the time of the Show.

35. All Sows born in or before 1934 must have produced a litter of *Sows.* pigs in the year of the Show before the opening day. Sows born between 1st January and 1st September 1935 must either have produced a litter of pigs before the Show, or produce a litter within three months of the last day of the Show. Certificates of the date of farrowing must be supplied in every case.

36. With reference to Regulation 33, birth of a live or full-time calf must be certified; and in regard to Regulation 34, birth of at least a nine months' foal; or in the case of the death of the dam, a Veterinary Surgeon's certificate must be produced certifying that at the time of death the animal was so far advanced with calf or foal that if it had lived it would have produced a full-time calf or foal within the periods stated in Regulations 33 and 34. Certificates required by the foregoing Regulations will be issued after the Show, and must reach the office of the Secretary as follows: calving certificates within ten months, foaling certificates within thirteen months, and farrowing certificates within four months, of the last day of the Show. In default of this, the animal will be regarded as having failed to fulfil the Regulations, and the Prize will therefore pass to the animal next in order of merit or be forfeited. *Calves and Foals. Calving, Farrowing, and Foaling Certificates.*

37. Except when otherwise provided, the awards of Special *Special Prizes.* Prizes shall not be subject to the Regulations as to calving, foaling, and farrowing.

38. The Premiums awarded, except those withheld till birth of calf or foal or litter of pigs is certified, will be paid as soon after the Show as practicable, and, with the exception of the Tweeddale Gold Medal, Special Cups, and Medals, may be taken either in money or in plate. *Payment of Prizes.*

39. No Stallion or entire Colt, two years old or upwards, shall be allowed to compete for any of the Society's Prizes unless it has previously been licensed for stud purposes during the current year by the Department of Agriculture for Scotland, the Ministry of Agriculture and Fisheries, or the Irish Department of Agriculture. *Veterinary Examination of Stallions and Colts.*

40. Judges are particularly requested to satisfy themselves, as far as possible, regarding the soundness of all Horses before awarding the Prizes, and to avoid giving Prizes to animals showing symptoms of hereditary disease. The Judges may consult the Society's Veterinary Surgeon if they deem it expedient. Private accommodation is provided for the examination of horses by the Veterinary Surgeon. *Soundness of other Horses. Accommodation for examination.* No protests on veterinary grounds will be received.

41. Every Ewe must have given birth to and reared a lamb in the *Ewes.* year of the Show; and Ewes of the Blackface and Cheviot breeds must be in milk, and have their lambs at foot.

- Milking.** 42. Animals in milk of the Dairy breeds must be milked dry at 6 o'clock on the evening previous to the opening of the Show in the presence of, and to the satisfaction of, the Steward of Cattle or a representative of the Society duly authorised by him. Animals arriving after six o'clock will be milked dry at the time of arrival.
- All animals in milk, in the Dairy Shorthorn and Ayrshire Cattle Classes, must be milked out in the ring before the awards are made.
- Clipping.** 43. Sheep must have been clipt bare after the first day of the November preceding the Show, no part of the animal to be clipt prior to that date—this Rule not to apply to Cheviot Sheep and Oxford Down Sheep.
- No Blackface Sheep shall be eligible which has not been clipt bare on or after the 1st April of the year of the Show. (This rule does not apply to Lambs.)
- Colouring, &c., of Sheep and Pigs.** 44. The Steward of Sheep, who can call in assistance if so desired by him, shall have full power to disqualify any pen of Sheep which he considers unnaturally coloured, or when the fleece, face, or legs have been dealt with by the use of foreign substances other than ordinary dips or bloom dips.
- The use of artificial whitening or powder on Large White Pigs is prohibited, and the Judge is empowered to disqualify any pig so whitened or powdered.
- Flock Books.** 45. All Oxford Down and Suffolk Sheep shown must be entered or eligible for entry in the Oxford Down and Suffolk Flock Books respectively.
- Poultry.** 46. In Poultry the Aged Birds must have been hatched previous to, and Cockerels and Pullets in, the year of the Show.
- Railway Passes.** 47. Railway Certificates for Stock, for both outward and return journeys, will be issued to Exhibitors before the Show along with their Tickets of Admission (see page 94)
- Admission of Stock.** 48. Poultry and Stock will be admitted on Monday, the day before the opening of the Show, and, with the exception of Horses, must be in the Yard before 12 o'clock that night. Horses must be in before 8 o'clock on the morning of Tuesday, except those entered in classes for which other times for arrival are elsewhere stated in this Premium List. Judging begins at 9.30 A.M. on Tuesday. Poultry and Stock will be exhibited on Tuesday, Wednesday, Thursday, and Friday. Any animals selected by the Stewards may be required to take part in the Stock Judging Competition on the Wednesday. Stock may be admitted on the Saturday preceding the Show, but only by sending two days' prior notice to the Secretary's Office in the Showyard.
- Parades.** 49. Horses and Cattle must be paraded at the times stated in the Programme of the Show, and when required by the Stewards, and under their direction. Females of the Highland Cattle breed born in or after 1927 must be paraded; those born before 1927 will be paraded at the option of the Exhibitor. In Parade, Horses must be ridden or led as provided in their respective classes. Prize and commended Cattle and Horses will receive two rosettes each, which must be attached to the head of the animal, one on each side. Attendants must be beside their animals *forty-five minutes before the hour of Parade*, and be ready to proceed to the ring immediately on receiving the order of the Stewards. Infringement of this Rule, or failure of any attendant to obey the orders of the Society's officials, will render the Exhibitor liable to a fine of 20s. for each separate infringement or act of disobedience, and to the forfeiture of any or all of the Prizes awarded to him at this Show.

50. Exhibitors shall be answerable for all acts, whether committed by themselves, their servants, or others in charge of their Stock, and shall be responsible for the condition of their animals during the whole time they remain in the Showyard. *Responsibility of Exhibitors.*

51. No animal shall be taken out of its stall after 10 A.M. during the Show except by order of the Stewards, or with permission of the Secretary. *Moving from stalls.*

52. Cattle shall not be taken out of their stalls to be washed after the Judging has commenced. Cattle must not be washed beside the Judging Rings. Those infringing this Rule shall be liable to a fine of 10s. *Washing Cattle.*

53. Soap or other adhesive material must not be used in dressing cattle or horses. The use of blacking or other colouring matter on cattle is prohibited. Infringement of this Rule will render the animal upon which the material is used liable to be disqualified. *Soaping prohibited. Colouring matter.*

54. Loose-boxes will be provided for all horses; covered accommodation for other live stock. Stalls for nurse cows charged at ordinary rates. Boxes (floored) for attendants on Cattle, Horses, Sheep, Goats, and Pigs will be provided at a charge of 40s. for each box for members; 50s. for non-members. (See Rule 79.) *Loose-boxes and Stalls.*

55. Exhibitors requiring the boxes, stalls, or pens for their animals to be floored must give instructions, stating the Catalogue No., to the Society's Showyard Erector, Mr John Reid, Showyard, ten days before the Show opens. (For charges, see Rule 78.) *Floored Boxes and Stalls for Animals.*

56. Bulls must be secured by nose-rings, with chains or ropes attached, or with strong halters and double ropes. All Cattle, other than Highland Cattle, must be tied in their stalls. *Securing Cattle.*

57. During the time the Show is open to the public no rug shall be hung up so as to conceal any animal in a horse-box or stall, except with the special permission of the Steward of that department. *Concealing Animals.*

58. Five days' supply of straw, hay, grass, and tares will be provided free by the Society. Any additional fodder or other kinds of food required will be supplied at fixed prices in the Forage-yard. The Forage-yard will close at 1.30 P.M. on Friday, the last supply to be given to attendants then; and if any extra supply is required on account of stock remaining in the Yard after the close of the Show, notice must be given to the Forage Steward not later than 5 o'clock on Thursday. Any servant removing bedding from an adjoining stall will be fined in double the amount taken. Exhibitors may fetch their own cake or corn to the Yard, but not *grass, tares, hay, or straw*. Coops, food, and attendance for Poultry will be provided by the Society. *Fodder.*

59. Servants in charge of Stock must bring their own buckets or pails and a piece of rope or sheep-net to carry their forage. Mangers, and sheep and pig troughs, will be provided. *Feeding appliances.*

60. Sawdust must not be used as bedding for Stock. *Sawdust.*

61. As the command of water in the Yard is limited, it is particularly requested that waste be avoided. *Water.*

62. No lights allowed in the Yard at night, and Smoking is strictly prohibited within the Sheds. Those infringing this Rule shall be liable to a fine of 10s. The gates will be closed at midnight, and no person shall be allowed to enter or leave the Yard between that time and 5 A.M. without a special permit. *Lights and Smoking. Closing of Gates.*

63. Stock or Poultry cannot be removed from the Yard till 5 P.M. on Friday, the last day of the Show, except on certificate by the Veterinary Surgeon employed by the Directors, countersigned by the Steward of the department or the Secretary. *Removal of Stock.*

*Withdrawal of horses over night.*

64. At the close of the Show on Tuesday, Wednesday, and Thursday, horses may be withdrawn for the night on a deposit of £5 for each animal, which shall be forfeited, along with any prize money it may have gained, if the animal is not brought back. They must return between 7 and 7.30 the following morning, and those not in before 8 shall forfeit 10s. Horse passes to be applied for at the Secretary's Office between 5 and 6 p.m. on Tuesday, and the deposit, unless forfeited in whole or in part, will be returned between 12.30 and 2.30 on Friday.

*Order in removal.*

65. When the Stock is leaving the Yard, no animal is to be moved till ordered by those in charge of clearing the Yard. Those transgressing this Rule shall be liable to a fine of 10s., and to be detained till all the other Stock is removed.

*Penning and removing Poultry.*

66. Poultry may be penned before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor an authorised representative of the Exhibitor being present to pen or remove Poultry, the birds will be penned and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to Exhibits by errors or accidents in penning, despatching, or conveying Exhibits.

*Closing of Poultry Shed to Public.*

67. On the opening day of the Show the Poultry Shed will be closed to the public during the Judging. On the last day of the Show the Poultry Shed will be closed to the public at 4 p.m.; at 5 p.m. Exhibitors or their representatives will be admitted to the Shed to remove Exhibits, provided the Exhibitor has, *not later than 11 a.m. on the last day of the Show*, given written notice to the Secretary to the effect that the Exhibitor or the Exhibitor's representative will attend at the Poultry Shed at 5 p.m. to remove the birds.

## JUDGING STOCK AND POULTRY.

*Opening Gates.*

68. On Tuesday, the first day of the Show, no person will be admitted, except Servants in charge of Stock, till 8 a.m., when the Gates are opened to the public.

*Judging.*

69. The Judges will commence their inspection at 9.30 a.m. The spaces reserved for the Judging will be enclosed, and no encroachment thereon shall be permitted.

*Innufficient merit.*

70. In no case shall a Premium be awarded unless the Judges deem the animals to have sufficient merit; and where only one or two lots are presented in a class, and the Judges consider them unworthy of the Premiums offered, it shall be in their power to award a lower prize.

*Commendations.*

71. In addition to the Premiums, the Judges may award **one** Very Highly Commended, **one** Highly Commended, and as many Commended tickets in each class as they consider justified by the number and merit of the entries.

*Ayrshire and British Friesian Cows and Heifers.*

72. Ayrshire and British Friesian Cows which have not calved before the Show, whether entered in a class for Cows in Milk or for Cows in Calf, shall be judged along with the Cows in Calf, and Ayrshire and British Friesian Cows or Heifers which have calved before the Show—in whichever of the classes entered—shall be judged along with Cows in Milk. Heifers entered in a Milk Class,

which have not calved before the Show, will be judged along with Heifers in Calf.

73. Attending Members will accompany the Judge of each section. It will be the duty of Attending Members to bring the animals out to the Judges and to see that no obstruction is offered to them, and that the space reserved for them is not encroached upon; to ticket the prize animals; to send the Nos. of the prize animals to the Award Lectern near the Secretary's Office; to assist the Judges in completing their return of awards; and should any difficulty arise, to communicate with the Stewards or Secretary.

*Attending  
Members  
duties.*

74. It shall not be competent for any Exhibitor, nor for his Factor or Land-Steward, to act as a Judge or Attending Member in any class in which he is competing.

### DAIRY PRODUCE.

75. Dairy Produce will be received in the Showyard on Monday, the day before the opening of the Show, and till 8 A.M. on Tuesday, the first day of the Show. Judged at 9.30 A.M. on Tuesday. Exhibited Tuesday, Wednesday, Thursday, and Friday.

76. Dairy Produce must have been made on the Exhibitor's farm in the year of the Show. No Exhibitor shall show more than one lot in each class. Exhibits of Dairy Produce may be placed before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor a person with written authority from the Exhibitor being present to place or remove exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 P.M. on the closing day of the Show, the Society will hold itself at liberty to hand them over to the railway companies for despatch to the respective Exhibitors.

*Placing  
and re-  
moving  
Dairy  
Produce.*

### STALL RENT.

77. The Stall Rents (which include Entry Fees), as stated opposite the individual classes in this List, shall be paid by Exhibitors when making their entries. The Secretary is instructed to return entries sent without the necessary fees.

*Stall Rent.*

### FLOORED BOXES AND STALLS.

78. Exhibitors desiring the boxes, stalls, or pens for their animals to be floored can have this done by giving instructions, stating the Catalogue No., ten days before the opening of the Show, to the Society's Showyard Erector (Mr John Reid, Showyard, Melrose), to whom the following charges for flooring have to be paid: Horses, 30s. each; Ponies, Cattle, Sheep, Goats, and Pigs, 20s. each.

*Floored  
Stalls for  
Animals.*



## ACCOMMODATION FOR ATTENDANTS.

*Accommodation for Attendants.*

79. Boxes for accommodation of attendants on Stock will, if desired, be provided beside the Stock at a charge of 40s. per box for members and 50s. for non-members. Attendants' boxes will be floored and lined with wood, with door. Applications for attendants' boxes must accompany entries of Stock, and in the case of all Horses, Exhibitors must state, at the time of entry, the animal next to which the attendant's box is to be placed. Attendants' boxes in the Cattle, Sheep, Goat, and Pig Sections will be erected at the end of each run of shedding. Attendants' boxes cannot be guaranteed after the closing date.

## IMPLEMENTS AND OTHER ARTICLES.

*Admission of Goods.*

80. Implements will be received in the Yard from Tuesday, 16th June, till 5 o'clock on the afternoon of Monday, 22nd June. Exhibited Tuesday, Wednesday, Thursday, and Friday. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor, and prices must be stated.

*Premiums:*

81. No Money Prizes or Medals, except when specially offered, will be given by the Society for Implements of any kind.

*Refusing Entries.*

82. Agricultural Implements, and Implements and collections of articles not Agricultural, will be received for Exhibition, but the Secretary is entitled to refuse entries from dealers in articles not deemed worthy of Exhibition.

*Local Operatives.*

83. In order to encourage exhibits of Agricultural Implements from operative Blacksmiths and Carpenters in the district of the Show, open space will be provided for these in some less prominent part of the Yard at a charge of 15s. for space 10 feet wide and 20 feet deep.

*Articles not entered.*

84. Every article to be exhibited must be entered on the Society's Entry Form. Any article not so entered that is taken to the Show is liable to be ordered out of, or removed from, the Showyard, or confiscated to the Society. Exhibitors infringing this Rule are moreover liable to a fine of £1.

*Selling by auction and noisy behaviour forbidden.*

85. "Cheap-Jacks" are not admitted to the Showyard. The selling of goods by auction, shouting, and other behaviour calculated to annoy visitors or Exhibitors, are strictly forbidden. The use of mechanical loud-speaking appliances is also prohibited. Exhibitors infringing this Regulation are liable to a fine of £1, and to have themselves and their goods ordered out of, or removed from, the Showyard, or to have their goods confiscated to the Society.

*Placing Exhibits. Removing Exhibits.*

86. The articles of each Exhibitor must all be placed in one Stand, except Implements in motion, and must not on any account extend beyond the allotted space. No article shall be moved out of its Stand, or the Stand dismantled, till the termination of the Show, at 5 P.M. on Friday.

*Restoring Turf.*

87. When the ground requires to be broken, the turf must be carefully lifted and laid aside, and the surface must be restored to the satisfaction of the Society, and at the expense of the Exhibitor. Failing this being done, the Society shall be at liberty to restore the ground and charge the cost to the Exhibitor.

*Arranging Exhibits.*

88. Exhibitors must arrange their own articles *within* the space allotted to them before 9 o'clock on Tuesday, the first day of the Show, and to the satisfaction of the Stewards in charge of the Implement Yard. Exhibitors are prohibited from sub-letting space

allotted to them, and from displaying the name of any other firm on their Stand. All signs, except signs on gables, must face the front only. Nails must not be driven into the canvas. *Signs.*

89. Exhibitors are not allowed to distribute handbills anywhere in the Yard except at their own Stand; and they must not for this or any other purpose encroach upon the adjacent alleys or open spaces. *Handbills.*

90. Exhibitors are required to have their Stands and the portions of the alleys immediately adjoining them swept up before eight o'clock on each morning of the Show. *Sweeping Stands, &c.*

91. All Machines requiring steam or fire must be entered as such in the Certificate, and will be placed in the Motion Yard. *Fuel.* *Coke only shall be used in all cases where fire is required.* Coal shall not be used at any time in the Showyard. Those infringing this Rule shall incur a penalty of £5.

92. No Steam Engine shall be driven in the Yard at a greater speed than 4 miles an hour. Traction Engines shall not be used in conveying Exhibits or other goods into or out of the Showyard or from one place to another therein. *Steam Engines.*

93. Locomotive and Traction Engines and other Machines must not be moved from their places without permission of the Secretary or Stewards, and must not leave their Stands till 6 P.M. on Friday. *Traction Engines.*

94. There must be attached to each Implement, when forwarded to the Show, a label bearing the Exhibitor's name, and that of the Implement, as well as the number of the Exhibitor's Stand. *Consigning Imple-ments.*

95. The carriage of all Implements must be prepaid.

96. Photographing in the Showyard is not permitted, except by photographers having a Stand in the Showyard or holding a "Photographer's Ticket." The "Photographer's Ticket" may be had from the Secretary, price 20s. It admits the holder to the Show when open to the public, and entitles him to photograph in the Showyard, subject to arrangements made by the Stewards. It does not entitle the holder to sell photographs in the Showyard. No photographer shall be allowed in the ring during Parades, except with the sanction of the Steward of Parades. *Photo-graphing in Show-yard.*

97. Covered Booths for Offices (9 feet by 9 feet), purely for business, not for exhibition of goods, can be had for £5 to Members and £7 to Non-Members. *Offices.*

98. Each Exhibitor in the Implement Department who is not a Member of the Society will receive one free Ticket of Admission to the Showyard for himself or a member of his firm. All Exhibitors will receive, for the use of attendants employed by him at his Stand, two Tickets of Admission for each complete ten feet of shedding in the Motion Yard, and one Ticket for each complete ten feet of shedding in the other sections. No additional Free Tickets can be issued in any circumstances whatever. Additional Attendants' Tickets, not more than three for each ten feet of frontage, and in no case exceeding a maximum of twenty for one Exhibitor, may be obtained by application in writing by the Exhibitor at 5s. each. *Exhibitors' and Attendants' Tickets.* *No tickets will be issued without an Order.*

99. The Tickets of Admission for Exhibitors and Attendants referred to in the foregoing Regulations will (about fourteen days prior to the Show) be issued to the Exhibitors in blank, with the number of the Exhibitor's Stand. The name of the person for whom each Ticket is intended must be written on it before it is used. Each person holding a Free Ticket of Admission must sign his or her name on the back thereof, and must also, when required, sign his or her name in the book at the Entrance Gate. Exhibitor's attendants are *Tickets to be filled up and signed.*

*Tickets not Transferable. Improper use of Tickets.*

*Admission of Supplies for Stand-holders.*

strictly cautioned not to lend or transfer their Tickets, which can be used only by the persons whose names they bear, and who must be *bona fide* acting for, or employed by, the Exhibitor. No ticket is transferable. An Exhibitor is liable to a fine of £1 for each case of transfer or other improper use of a Ticket issued to himself or employee.

100. The following are the arrangements for the admission of Supplies (Refreshments or other goods) for Stand-holders during the Show: Messenger on foot (with or without hand-barrow), with supplies, admitted by Special Ticket; price for one admission, 2s., for six admissions, 10s. Motor or horse vehicle and driver, with supplies, admitted by Special Ticket; price for one admission, 2s. 6d., for six admissions, 12s. These Special Tickets may be had from the Secretary. Vehicles, with supplies, will be admitted to the Showyard only between *Seven o'clock and Nine o'clock*, on each morning of the Show, except by written permit from the Secretary.

Vehicles, with a carrying capacity of more than 2 tons, will not be admitted to the Showyard at any time, except by special permit from the Secretary. This rule will be strictly enforced.

101. Motor Lorries, Vans, or other vehicles belonging to Stand-holders, will not be allowed to remain in the showyard during the period of the Show. Vehicles conveying exhibits to Stands prior to the Show must follow the routes indicated by the Society's officials, and must leave the Showyard immediately on completing delivery. Motor Cars conveying passengers will not be permitted to enter the Showyard.

*Cycles.*

*Accidents.*

102. The riding of Cycles in the Showyard is prohibited.

103. The Society will not be responsible for any accident that may occur from the machinery belonging to any Exhibitor; and it is a condition of entry that each Exhibitor shall hold the Society harmless, and indemnify it against any legal proceedings arising from any accident caused by his machinery.

*Alcoholic Drinks.*

104. The giving of Alcoholic Drinks to visitors at Stands in the Show is strictly prohibited. With a view to the enforcement of this rule the Society reserves the right of unrestricted access, by its authorised representative, to all Exhibitors' Stands during the Show.

*Gas and Electric Power.*

105. Exhibitors desiring the use of gas in the Showyard should apply to the Manager, Gas Works, Melrose, and those desiring electric power should apply to Messrs Pratt Bros. (Edinburgh), Ltd., 3 West Park Place, Dalry Road, Edinburgh, in both cases not later than 16th May.

*Space for Stands.*

106. \* Ground to be taken in spaces of 10 feet frontage by 20 feet deep, and in Motion Yard in spaces of 10 feet frontage by 50 feet deep. Exhibitors must take their space in one or other of the following Sections. Space is not let partly covered and partly open. Exhibits not in motion may be excluded from the Motion Yard. The space in the Motion Yard being limited in extent, and intended mainly for exhibits in motion, not more than one-fifth of the space allotted to any one Exhibitor—and in no case more than 600 square feet—may be occupied in the Motion Yard by exhibits not in motion.

*Maximum Space.*

107. The maximum extent of space which any one Exhibitor may apply for shall be 60 feet of frontage in the Motion Yard, and 120 feet of frontage in the other Sections.

*Allocation of space.*

108. The Society reserves the right to allot to applicants for Stands either the whole or part of the space they ask for.

\* Special provision may be made for Exhibitors of both machinery in motion and implements and machinery not in motion on application being made to the Secretary.

109. Exhibitors requiring work executed in connection with the fitting up of Stands allotted to them must employ the Society's Show-yard Erector—Mr John Reid, 55 Blenheim Place, Aberdeen. The execution of orders received later than one week before the opening of the Show cannot be guaranteed.

110. Rates for space, payable by Exhibitors when making their Entries:—

	Members.	Non-Members.
1. Open ground without Shedding, 20 ft. deep, per 10 ft. frontage	£1 10 0	£2 5 0
2. Special open ground, without Shedding, 20 ft. deep, per 10 ft. frontage	2 10 0	3 5 0
3. Ordinary Shedding, 20 ft. deep, 7 ft. to eave, per 10 ft. frontage	1 10 0	2 5 0
4. Special Shedding, 20 ft. deep, 7 ft. to eave, per 10 ft. frontage	2 10 0	3 5 0
5. Ordinary Shedding, 20 ft. deep, 7 ft. to eave, close boarded at back, per 10 ft. frontage	3 0 0	4 0 0
6. Special Shedding, 20 ft. deep, 7 ft. to eave, close boarded at back, per 10 ft. frontage	4 10 0	5 10 0
7. Main Square, without Shedding, for erection of Exhibitor's own Pavilion (construction of which must be approved by Society), 50 ft. deep, per 10 ft. frontage	5 0 0	6 10 0
8. †Motion Yard, without Shedding, 50 ft. deep, per 10 ft. frontage	3 0 0	4 10 0
9. †Motion Yard, with Shedding (10 ft. open behind, 20 ft. covered, and 20 ft. open in front), 11 ft. to eave, per 10 ft. frontage	4 10 0	6 0 0
10. Special Section for Motor Vehicles, 30 ft. deep (20 ft. covered and 10 ft. open in front), 11 ft. to eave, per 10 ft. frontage	4 10 0	5 10 0
11. Covered Booths for offices, 9 ft. by 9 ft., each	5 0 0	7 0 0
12. Press offices, 9 ft. by 9 ft., each	£4.	

† See Rules 106 and 107.

Tents and marquees not allowed in the Showyard. All internal fittings to be executed by the Exhibitor at his own expense. The Society's Showyard Erector must be employed. See Rule 109.

## FLOWER SHOW.

See also Regulations 80 to 109.

Judges: William B. Clark; John Melrose.

1. Exhibits in this section may comprise collections of flowers, fruits, plants, or shrubs, formal gardens, and rock gardens.

2. The Society will award six Gold Medals for exhibits of outstanding merit in the Flower Show. Silver Medals, not exceeding six in number, will be offered for next best exhibits.

3. Application for space, for which no stand rent or entry fee is payable, must be made on special entry forms, to be obtained from the Secretary and lodged on or before 25th April. Entry forms must give full details of each exhibit and the amount of space required. Space, which may be either covered or open, will be allocated in sections of 10 feet each, with a depth of 20 feet, and a maximum of 60 feet frontage for one exhibitor. For space without shedding special consideration will be given to applications from exhibitors desiring a greater depth than 20 feet. Staging will be provided free of charge.

4. The Society reserves the right to refuse any application for space, or to limit the amount of space to be allocated to any exhibitor.

5. Each exhibitor shall receive one exhibitor's ticket and, in addition, two attendants' tickets for each 10 feet of frontage. Additional attendants' tickets, not more than three for each 10 feet of frontage,

and in no case exceeding a maximum of twenty, may be purchased at a price of 5s. each. *No tickets will be issued without an order.*

6. All exhibits must be in position not later than 5 P.M. on Monday, 22nd June, with the exception of cut flowers, which may be staged up till 8 A.M. on Tuesday, 23rd June. Judging will commence at 9.30 A.M. on Tuesday. Stands must remain open until the Show closes on each of the four days.

### NEW IMPLEMENTS.

1. Entries of New Implements for the Society's Silver Medal must be made on or before 6th April. Entries shall be made on a special form obtainable from the Secretary, and must define clearly the exact nature of the novelty which qualifies such implement to be entered for a Medal. Unless the "New Implement" be properly described in the specification, and particulars of its novelty are given at the time of making the entry, it will not be accepted.

2. For each entry of a "New Implement," a non-returnable Entry Fee of £1 will be charged.

3. In cases of sufficient merit, the Judges will recommend the award of the Society's Silver Medal to New Implements for agricultural or estate purposes, or to new improvements in such implements.

4. The Society does not bind itself to try in the field every "New Implement" entered for a Silver Medal, but in general a practical trial will be required before an award is made. The Judges shall report to the Directors those cases in which they consider a practical trial necessary.

5. Where intimation is received by the Secretary, not later than the 27th April, that a "New Implement" is ready for trial, the Directors may arrange for a practical trial before the Show at a place and date to be decided upon. In other cases the practical trial of New Implements will take place after the Show.

6. Any Exhibitor who expresses a wish to do so can, with the sanction of the Steward of Implements, at his own expense take his New Implement out of the Showyard during the Show week and put it to work, and, if within a reasonable distance, the Judges will, if they deem it necessary, inspect it at work and decide if it is worthy of a Silver Medal.

7. No Silver Medals will be awarded to, nor can any entry as New Implements be accepted of, machines of any class for which competitive trials have been announced by the Society as about to take place.

8. The Judges of New Implements will commence their inspection at 2.30 P.M. on Monday, 22nd June, and will take in rotation the stands of the Exhibitors who have entered New Implements for the Society's Silver Medals. Each Exhibitor, or his representative, will be expected to be at the stand to explain the working of the Implement to the Judges. If the exhibit be not ready and in working order by the time the Judges make their inspection, it is liable to be struck off the list.

9. All publications by Exhibitors of the award of the Society's Silver Medals must state the year of the award, and must specify the exact nature of the "New Implement," of the improvement, or of the attachment to an Implement, for which the Silver Medal has been awarded.

10. On the recommendation of the Judges, with the approval of the Directors, any New Implement of merit, which cannot be sufficiently tried, or which is capable of further development, may be

entered and exhibited as a "New Implement" at the succeeding Show of the Society.

11. The Judges' decision, when duly accepted and recorded, will in all cases be final.

#### RESERVED SEATS (NUMBERED) IN GRAND STAND.

*For Charges and Tickets, apply to Secretary up to opening day of Show. Thereafter tickets are sold only in the Showyard at the Booking-office behind the Grand Stand.*

#### ADMISSION OF THE PUBLIC.

The public will be admitted daily at 8 A.M. Judging begins on Tuesday at 9.30 A.M. The charges for admission to the Yard will be—Tuesday, from 8 A.M. till 5 P.M., 5s. Wednesday, from 8 A.M. till 5 P.M., 5s.; from 5 P.M. to 8 P.M., 2s. Thursday, from 8 A.M. till 5 P.M., 2s. 6d.; from 5 P.M. till 8 P.M., 1s. Friday, from 8 A.M. till 5 P.M., 1s.

On Thursday and Friday children under twelve years of age admitted at 6d.

No Pass-out Checks given, and no re-admission without payment

Season Tickets—12s. 6d. each (children under 12 years of age, 5s. each)—on application to Secretary. On the days of the Show, Season Tickets are sold only at the Entrance Gates.

#### ADMISSION OF MEMBERS AND EXHIBITORS.

On exhibiting their "*Member's Badge*," which is strictly not transferable, Members of the Society are admitted free to the Showyard. Badges will be sent to all Members residing in Great Britain, Northern Ireland, and Irish Free State, whose addresses are known, and on no account will duplicates be issued. All Members not producing their badges must pay at the gates, and the admission money will not on any account be returned. Badges must be signed by Members before being presented at the gate, and Members should continue to wear the badge during the whole time that they are in the Showyard.

Tickets of admission to the Showyard are sent to Exhibitors of Stock, Poultry, Dairy Produce, &c. (not Members), whose Entry Fees amount to not less than 12s. 6d.

For Exhibitors of Implements and their assistants tickets are issued as provided in the Regulations for Implements.

#### VARIOUS.

Exhibitors may display their own Placards *inside and in front of* their stands; with this exception, no Bills of any kind other than those of the Society are permitted on any of the Show erections. No newspapers or any other articles to be carried about the Yard for sale or display.

*No Carriages or Equestrians admitted without special leave from the Directors, and then only for Invalids. Bath-chairs may be brought in.*

Premium Lists, Regulations, and Certificates of Entry may be obtained by applying at the Secretary's Office, No. 8 Eglinton Crescent, Edinburgh 12.

*All Communications should be addressed to the Secretary of the Highland and Agricultural Society of Scotland, No. 8 Eglinton Crescent, Edinburgh 12. From 16th to 25th June, to the Secretary's Office, Showyard, Melrose.*

*Address for Telegrams—"SOCIETY," EDINBURGH.*

*Telephone No.—EDINBURGH, 23655.*

## RAILWAY ARRANGEMENTS.

The Railway Companies will be furnished with a list of the Exhibitors of Stock and Implements, after the 2nd June. All applications for horse-boxes and trucks, and for information as to train arrangements, must be made by the Exhibitors themselves to the Stationmaster where their stock is to be trucked.

*The arrangements made by the Railway Companies for the conveyance of Live Stock and Goods to and from the Show are indicated below, but Exhibitors are recommended to apply to the respective Companies for full particulars:—*

1. Live Stock, Agricultural Machines, Implements, and other exhibits to the Show to be charged ordinary rates.

2. Live Stock, Agricultural Machines, Implements, and other exhibits from the Show, if sold, to be charged ordinary rates.

3. Live Stock from the Show, if unsold, and returned not later than the second day after the closing day of the Show (excluding Sunday), to be carried at half rates back to the Station whence the animals were sent, at owner's risk, on surrender of a Certificate from the Exhibitor, provided in accordance with the Railway Companies' requirements, and signed by the Secretary, to the effect that they are really unsold; failing surrender of such Certificate, ordinary rates will be charged. The reduction to half rates is to be allowed only when the Stock are consigned to be returned by the same route as that by which they were conveyed to the Show, but it shall be in the option of the Railway Company or Companies to return the Stock at half rates by a different route. Minimum charge for Stock returning at half rates to be one-half the ordinary minimum.

4. Live Poultry from the Show, *if unsold*, to be carried by Passenger Train at half rates back to the Station from which sent, at O.R., on surrender of an agreed Certificate signed by the Secretary of the Show to the effect that the Poultry are unsold and remain the property of the Exhibitor. No Certificate will be required for such traffic, which is intended by the owner to be returned from the Show to the original sending Stations by the same route as originally forwarded and the charges prepaid for both the outward and return journeys. (Poultry to be charged ordinary rates both ways when conveyed by Goods Train.)

Poultry are only charged at the half rate when returned by Passenger Train not later than the second day after the closing of the Show (Sunday being treated as a *dies non*).

5. Horse-boxes, or other Passenger Train vehicle, will not be provided for the carriage of Live Stock sent by Goods Train and invoiced at Goods Train rates. *For rates for Horse-boxes by Passenger and Special Trains, apply to the Railway Companies.*

6. Provender conveyed to and from Agricultural Shows in the same vehicle as Live Stock will be charged at the applicable rates, subject to a free weight allowance, viz.—

Cattle . . . . .	per animal, 112 lb.
Horses . . . . .	„ 112 „
Sheep, goats, lambs, pigs, and calves . . . . .	„ 56 „

7. The carriage of all Live Stock, Implements, and other articles going to the Show for exhibition must be PREPAID; and the carriage on all traffic returned from the Show by Passenger Train Service must be PREPAID.

The carriage charges on Live Stock conveyed in special vehicles by Passenger Train and intended to be returned to the original

sending Station may also be prepaid for the return journey at the original sending Station if the owner so desires.

The Railway Charge on all exhibits which are conveyed by Passenger Train in the Guard's Van and intended to be returned from the Show direct to the original sending Station by the same route must be PREPAID, for both the outward and return journeys, at the original sending Station. The agreed form of address label for Poultry, Dairy Produce, Eggs, Bee Appliances, and Rural Industries exhibits, which will be supplied through the Secretary of the Society, must be used in such cases.

8. Attendants in charge of Live Stock are conveyed free in the cases shown below, when certified by the owners to be *bona fide* in charge of such Live Stock :—

*In Horse-Boxes.*—Horses and Cattle : One man for each consignment, except where the consignment requires more than one vehicle, when one man to each vehicle may be sent free; but where two or three Horses or Cattle forming one consignment are sent in the same Horse-box and a man is required to travel with each animal, a man for each animal may be conveyed free, provided each animal is charged for separately.

*In Horse-Boxes.*—Small animals : One man to each vehicle.

*In specially constructed Cattle Trucks.*—Cattle or other animals : One man to each vehicle.

9. Agricultural Machines, Implements and other Exhibits from the Show, if *unsold*, to be conveyed at half rates back to the Station whence they were sent, at Owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold; failing production of such Certificate, ordinary rates must be charged. The reduction to half rates is to be allowed only when the articles are returned by the same route as that by which they were conveyed to the Show, but it shall be in the option of the Railway Company or Companies to return the articles at half rates by a different route. This applies only to Goods Train Traffic.

10. Unsold articles, previously carried by railway, transferred from one Show to another, or exhibited at several Shows consecutively, and returned to the Station from whence originally sent, will be conveyed at half rates at Owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold; failing production of such Certificate, ordinary rates will be charged. This applies only to Goods Train Traffic.

11. Unsold Live Stock transferred from one Show to another will be charged ordinary rates.

12. The ordinary rates charged for carriage do not in any case include delivery *to*, or collection *from*, the Showground.

13. Agricultural Societies' Show Plant must be charged at Class 10 rates, Station to Station.

14. Tents, Canvas, Show Stands, and other articles not for exhibition—

(a) When the property of Exhibitors, to be charged half the ordinary rate at Owner's risk from Show to Show, and on return from the Show to the Station from whence originally despatched.

(b) When not the property of Exhibitors, to be charged the ordinary rates both going to and returning from Show.

15. Carriages and other Road Vehicles are only conveyed by Passenger Train when this can be conveniently done.



## DELIVERY AND COLLECTION CHARGES.

Cartage Charges to be paid by the Exhibitor for the Delivery or Collection of traffic between the Railway Station at Melrose and the Showground of the Highland and Agricultural Society's Show at Melrose, on 23rd, 24th 25th, and 26th June.

General traffic . . . . .	5s. 6d. per ton.
Minimum charge per consignment . . . . .	3s.
Implements and Machinery (Agricultural), not exceeding 1 ton each . . . . .	5s. 6d. per ton.
Minimum charge per delivery . . . . .	3s.
Implements and Machinery (Agricultural) on their own wheels (specially hauled), not exceeding 1 ton . . . . .	7s. 6d. each.
When hauled on their own wheels behind a Railway Company's lorry, loaded or partly loaded with goods, actual weight at . . . . .	5s. 6d. per ton.
Single articles, exceeding 1 ton but not exceeding 3 tons . . . . .	8s. per ton.
Single articles, exceeding 3 tons but not exceeding 5 tons . . . . .	9s. 6d. per ton.
Single articles, exceeding 5 tons, by special arrangement only, but no less charge than . . . . .	11s. 9d. per ton.
Railway containers (net weight of contents) . . . . .	8s. per ton.
Minimum charge . . . . .	8s.
Loaded vans on their own wheels exceeding 1 ton but not exceeding 3 tons . . . . .	8s. per ton.
Loaded vans on their own wheels exceeding 3 tons but not exceeding 5 tons . . . . .	9s. 6d. per ton.
Loaded vans on their own wheels exceeding 5 tons, by special arrangement only, but no less charge than . . . . .	11s. 9d. per ton.
Rustic Houses, by special arrangement only, but no less charge than . . . . .	14s. per load.
Carriages, on their own wheels . . . . .	7s. each.
Carriages, if carried on a Railway Company's lorry . . . . .	7s. 6d. per ton.
Minimum charge per consignment . . . . .	7s. 6d.
Cattle, in floats . . . . .	5s. per head.
Minimum charge for each float . . . . .	7s. 6d.
Sheep, Goats, and Pigs, in floats . . . . .	1s. 6d. per head.
Minimum charge for each float . . . . .	7s. 6d.
Pigs, in crates . . . . .	3s. 3d. per crate.
Minimum charge per load . . . . .	6s. 6d.
Ordinary Parcels by passenger train . . . . .	6d. each.
Miscellaneous passenger train traffic, including packages of plants and flowers carried at O.R. rates S. to S. . . . .	9d. per cwt.
Minimum charge per consignment . . . . .	1s. 6d.
*Poultry, in crates or hampers . . . . .	9d. per crate or hamper.
Cartage from point to point inside the Showground . . . . .	3s. per hour.
Minimum charge . . . . .	3s.

\* Poultry exhibits only will be conveyed at the Society's expense from the Railway Station to the Showyard and back, but no exhibit subject to railway charges will be received by the Society. All other delivery charges must be paid by the Exhibitor.

## THE PRESIDENT'S CHAMPION MEDALS

A Champion Medal is given by the Duke of Buccleuch and Queensberry, G.C.V.O., President of the Society, for the best *Animal* in each of the following sections:—

- |                                 |                                      |                      |
|---------------------------------|--------------------------------------|----------------------|
| 1. Shetland.                    | 10. Clydesdale Gelding.              | 18. Half-Bred        |
| 2. Dairy Shorthorn.             | 11. Clydesdale Mare or Filly.        | 19. Oxford Down.     |
| 3. Aberdeen-Angus               | 12. Hunter.                          | 20. Suffolk.         |
| 4. Galloway.                    | 13. Highland or Western Island Pony. | 21. Wensleydale      |
| 5. Belted Galloway.             | 14. Shetland Pony.                   | 22. Fat Sheep.       |
| 6. Highland.                    | 15. Blackface Sheep                  | 23. Goat.            |
| 7. Ayrshire.                    | 16. Cheviot.                         | 24. Large White Pig. |
| 8. British Friesian             | 17. Border Leicester.                | 25. Large Black.     |
| 9. Clydesdale Stallion or Colt. |                                      |                      |

NOTE—*Animals entered as Extra Stock may compete for these Medals. Former Winners of the President's Medals are eligible. The Society shall have the right to photograph the Winners for publication in the 'Transactions.'* At this Show no animal can be awarded more than one of these Medals.

ENTRY FEES		CLASS	* CATTLE SHORTHORN	PREMIUM.		
Members	Non-Members			First	Second	Third
			Judges: Robert L P Duncan; Alexander Ritchie	£	£	£
			<i>President's Champion Medal for best Shorthorn Animal</i>			
25/-	45/-	1	Bull born before 1st December 1933 . . . . .	15	10	5
25/-	45/-	2	Bull born on or after 1st December 1933 and before 1st April 1934 . . . . .	15	10	5
25/-	45/-	3	Bull born on or after 1st April 1934 and before 1st December 1934 . . . . .	12	8	4
25/-	45/-	4	Bull born on or after 1st December 1934 and before 1st April 1935 . . . . .	12	8	4
25/-	45/-	5	Bull born on or after 1st April 1935 . . . . .	10	6	4
25/-	45/-	6	Cow in Milk, born before 1st December 1932 . . . . .	12	8	4
25/-	45/-	7	Cow in Milk, born on or after 1st December 1932 and before 1st December 1933 . . . . .	10	5	3
25/-	45/-	8	Cow or Heifer born on or after 1st December 1933 and before 1st December 1934 . . . . .	10	5	3
25/-	45/-	9	Heifer born on or after 1st December 1934 and before 1st April 1935 . . . . .	10	5	3
25/-	45/-	10	Heifer born on or after 1st April 1935 . . . . .	10	5	3

\* See Rules 32 and 33.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			<b>SHORTHORN—continued</b>				
			<sup>1</sup> Paisley Perpetual Gold Challenge Cup, value £300, for best Shorthorn Animal, "Extra Stock" eligible to compete.				
			<sup>2</sup> The Duthie Perpetual Challenge Cup, value £150, for best Animal in the Shorthorn Classes, "Extra Stock" eligible to compete.				
			<sup>3</sup> Silver Cup, value £50, for the best Group of three animals in the Shorthorn Classes, consisting of one Bull and two Females, "Extra Stock" eligible to compete. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession.				
			<sup>4</sup> The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value 50 guineas, for best Shorthorn Bull in Class 5, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test.				
			<sup>5</sup> Best Shorthorn Bull in the Show, entered or eligible for entry in Coates's Herd-Book—£20.				
			<sup>5</sup> Silver Medal to the Breeder of the winner of above Prize.				
			Breeder of best Bull of any age in the five Classes ("Extra Stock" not eligible to compete) —The Silver Medal.				
			<sup>5</sup> Best Shorthorn Female in the Show, entered or eligible for entry in Coates's Herd-Book—£20.				
			<sup>5</sup> Silver Medal to the Breeder of the winner of above Prize.				
			PRIZE MONEY BY SOCIETY. . . . .	£246			
			CONTRIBUTED . . . . .	40			

<sup>1</sup> This Cup, along with an endowment of £600, was provided from money collected in Paisley by the late Provost Muir M'Kean, and is in commemoration of the Society's first Show at Paisley in 1913. This year the Cup is offered for the best Shorthorn animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

<sup>2</sup> This Cup was gifted by the late Mr William Duthie, Collynie. The Cup may not be won on more than one occasion with the same animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica as a memento of his winning the Cup.

<sup>3</sup> Given by Mr William M'Nair Snadden, The Coldoch, Blair Drummond, Stirling.

<sup>4</sup> Given by Messrs J. Baird & Co. (Falkirk) Ltd., Bantaskin, Falkirk. This Cup will become the property of the Exhibitor who shall win it three times, not necessarily in succession.

<sup>5</sup> Given by the Shorthorn Society.

ENTRY FEES		CLASS		PREMIUMS		
Members	Non-Members			First	Second	Third
			<b>CATTLE</b>			
			<b>DAIRY SHORTHORN</b>			
			Judge: William Briggs			
			<i>President's Champion Medal for best Dairy Shorthorn Animal</i>			
25/-	45/-	11	Cow in Milk, any age . . . . .	10	5	3
25/-	45/-	12	Cow in Calf and not in Milk, any age . . . . .	10	5	3
25/-	45/-	13	Cow in Milk to first Calving, born in 1933 . . . . .	10	5	3
25/-	45/-	14	Bull, born in or before 1934 . . . . .	10	5	3
25/-	45/-	15	Bull, born in 1935 . . . . .	10	5	3
			PRIZE MONEY BY SOCIETY . . . . .	£45		
			<sup>1</sup> CONTRIBUTED . . . . .	45		

**CONDITIONS.**

All animals must be entered or their pedigrees provisionally accepted for entry in Coates's Herd-Book.

**COW AND HEIFER CLASSES**

1. All animals in milk must be clean milked out and afterwards stripped by a competent stripper to the satisfaction of the Stewards at six o'clock in the evening previous to being judged. Any animal milked before this time will be liable to disqualification.

2. On the judging day all animals must be milked out in the ring in the presence of the Judge, so that he may be able to form an opinion of the udder after milking.

3. No animal being 4 years and 3 calendar months of age and upwards on the first day of the Show shall be eligible to compete unless it has been registered or provisionally accepted by the Shorthorn Society as being eligible for registration as a Qualified Bull-Breeder, and possesses the following minimum milk yields given in 315 consecutive days of one lactation period:—

Age on first day of Show.	Minimum Milk Yields if milked twice daily.	Minimum Milk Yields if milked three times daily for more than 30 days after calving.	Minimum Milk Yields if milked four times daily for more than 30 days after calving.
6 years and 3 calendar months and upwards . . . . .	8,000 lb.	9,200 lb.	10,000 lb.
5 years and 3 calendar months and under 6 years and 3 calendar months . . . . .	6,500 lb.	7,475 lb.	8,125 lb.
4 years and 3 calendar months and under 5 years and 3 calendar months . . . . .	5,500 lb.	6,325 lb.	6,875 lb.

Contributed by the Shorthorn Society.

## CATTLE

DAIRY SHORTHORN—*continued*

Such qualifying milk yields must have been entered or provisionally accepted for entry in the Dairy Shorthorn Year Book.

4. Animals under 4 years and 3 months old on the first day of the Show, *unless they shall have been registered (or provisionally accepted) by the Shorthorn Society as being eligible for registration as qualified Bull-breeders, in respect of a yield of 5500 lb. in accordance with the rules of the Society,* must be milked in the presence of the Judge, who will see such milk weighed, and all such animals must, in order to entitle them to be included in the Award List, yield up to the following standard:—

Standard.	Having calved 2 calendar months or less from the first day of the Show.	Having calved over 2 but not more than 3 calendar months from the first day of the Show.	Having calved more than 3 calendar months before the first day of the Show.
Heifers, 3 years and 3 months of age and over at date of calving, not less than . .	23 lb.	20 lb.	17 lb.
Heifers, under 3 years and 3 months of age at date of calving, not less than . .	17 lb.	15 lb.	13 lb.

5. No animal shall have its teats sealed during the Show nor shall the udder be in any way "faked." Any infringement of this rule shall entail disqualification of the animal concerned, and the exhibitor shall be reported to the Society and to the Council of the Shorthorn Society.

6. In the classes where the animals are not required to qualify by weight of milk given in the ring, the official milk yield in respect of 315 consecutive days of the most recent lactation of every animal shall be supplied so that it may be entered in the Judge's book in order that the larger yielding cows may receive the consideration to which they are entitled and which they previously received when they had to qualify by weight of milk given in the ring.

## BULL CLASSES

In the Bull Classes no animal is eligible to compete unless he has been registered or provisionally accepted for registration in Coates's Herd-Book and in the Dairy Shorthorn Year Book.

ENTRY FEES			PREMIUMS				
Members	Non-Members	CLASS		First	Second	Third	Fourth
				£	£	£	£
CATTLE							
ABERDEEN-ANGUS							
Judges : C. F. Tulloch ; Samuel E. Williams							
<i>President's Champion Medal for best Aberdeen-Angus Animal</i>							
15/-	45/-	16	Bull born before 1st December 1933 . . . . .	15	10	5	3
15/-	45/-	17	Bull born on or after 1st December 1933 and before 1st December 1934 . . . . .	15	10	5	3
15/-	45/-	18	Bull born on or after 1st December 1934 and before 1st March 1935 . . . . .	12	8	4	2
15/-	45/-	19	Bull born on or after 1st March 1935 . . . . .	10	6	4	2
15/-	45/-	20	Cow in Milk, born before 1st December 1932 . . . . .	12	8	4	2
15/-	45/-	21	Cow in Milk, born on or after 1st December 1932 and before 1st December 1933 . . . . .	12	8	4	2
15/-	45/-	22	Cow or Heifer born on or after 1st December 1933 and before 1st December 1934 . . . . .	10	5	3	2
15/-	45/-	23	Heifer born on or after 1st December 1934 and before 1st March 1935 . . . . .	10	5	3	2
15/-	45/-	24	Heifer born on or after 1st March 1935 . . . . .	10	5	3	2
<sup>1</sup> Silver Cup, value £50, for best Group of Aberdeen-Angus Cattle, consisting of one Bull and two Females, "Extra Stock" not eligible to compete. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession.							
<sup>2</sup> Ballindalloch Challenge Cup, value £50, for the best Bull of any age in the four Classes.							
<sup>3</sup> Silver Cup, value 50 guineas, for best Aberdeen-Angus Bull born on or after 1st December 1933, to become the property of an Exhibitor who shall win it three times, not necessarily in succession.							
Breeder of best Bull of any age in the four Classes ("Extra Stock" not eligible to compete) —The Silver Medal.							

<sup>1</sup> Given by Mr J. E. Kerr of Harviestoun, Dollar. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

<sup>2</sup> "The Ballindalloch Challenge Cups," value £50 each, are offered for the best Bull of any age and best Cow of any age (Heifers excluded) in the Aberdeen-Angus Classes, the former presented by the late Sir George Macpherson Grant, Bart., and the latter by the late Sir John Macpherson Grant, Bart. Each Cup will become the property of the Exhibitor who shall win it five times, not necessarily in succession. The Exhibitor and Breeder of the successful animals each year will receive the Society's Silver Medal, with suitable inscription.

<sup>3</sup> Given by Senor Eduardo Estanguet, Argentina.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<p><b>ABERDEEN-ANGUS—continued</b></p> <p><b>Exhibitor of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.</b></p> <p><b>Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.</b></p> <p><sup>1</sup> <b>Ballindalloch Challenge Cup</b>, value £50, for the best Cow of any age in Classes 20, 21, and 22.</p> <p><b>Exhibitor of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.</b></p> <p><b>Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.</b></p> <p><sup>2</sup> <b>Silver Cup</b>, value £50, for the best Female Animal of the Aberdeen-Angus breed, to become the property of an Exhibitor who shall win it four times, not necessarily in succession. "Extra Stock" eligible to compete.</p> <p><sup>3</sup> <b>Champion Gold Medal</b>, value £10, for best Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete.</p>				
			<p><b>PRIZE MONEY BY SOCIETY . £226</b></p>				

<sup>1</sup> "The Ballindalloch Challenge Cups," value £50 each, are offered for the best Bull of any age and best Cow of any age (Heifers excluded) in the Aberdeen-Angus Classes, the former presented by the late Sir George Macpherson Grant, Bart., and the latter by the late Sir John Macpherson Grant, Bart. Each Cup will become the property of the Exhibitor who shall win it five times, not necessarily in succession. The Exhibitor and Breeder of the successful animals each year will receive the Society's Silver Medal, with suitable inscription.

<sup>2</sup> Presented by Mr Falconer L. Wallace of Candacraig, Strathdon. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

<sup>3</sup> Given by The Aberdeen-Angus Cattle Society.

ENTRY FEES		CLASS	CATTLE  GALLOWAY	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			Judge: William M. M'Conchie				
			<i>President's Champion Medal for best Galloway Animal</i>				
25/-	45/-	25	Bull born before 1st December 1933 . . . . .	15	10	5	3
25/-	45/-	26	Bull born on or after 1st December 1933 and before 1st December 1934 . . . . .	15	10	5	3
25/-	45/-	27	Bull born on or after 1st December 1934 . . . . .	12	8	4	2
25/-	45/-	28	Cow in milk, born before 1st December 1933 . . . . .	12	8	4	2
25/-	45/-	29	Cow or Heifer born on or after 1st December 1933 and before 1st December 1934 . . . . .	10	5	3	2
25/-	45/-	30	Heifer born on or after 1st December 1934 . . . . .	10	5	3	2
<sup>1</sup> Dr Gillespie Memorial Challenge Trophy, value £50, for best Galloway Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete—see conditions below. <sup>2</sup> Silver Challenge Cup, value £50, for best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Challenge Trophy, "Extra Stock" eligible to compete. Breeder of best Bull of any age in the three Classes ("Extra Stock" not eligible to compete) — The Silver Medal.							
PRIZE MONEY BY SOCIETY . . . . .				£158			

<sup>1</sup> This Trophy was presented by the Galloway Cattle Society of Great Britain and Ireland for the best Galloway animal registered in the Galloway Cattle Society's Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive the Galloway Cattle Society's Silver Medal as a memento of his winning the Trophy.

<sup>2</sup> This Cup was presented by the Galloway Cattle Society to commemorate the Hundredth Show of the Highland and Agricultural Society, to be awarded to best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Trophy registered in the Galloway Cattle Society's Herd-Book. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.



ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
<b>CATTLE</b>							
<b>BELTED GALLOWAY</b>							
Judge: William Hyslop							
<i>President's Champion Medal for best Belted Galloway Animal</i>							
25/-	45/-	31	Bull born before 1st December 1934 . . .	10	5	3	2
25/-	45/-	32	Bull born on or after 1st December 1934 . . .	10	5	3	2
25/-	45/-	33	Cow or Heifer born before 1st December 1933, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show . . .	10	5	3	2
25/-	45/-	34	Heifer born on or after 1st December 1933 and before 1st December 1934 . . .	10	5	3	2
25/-	45/-	35	Heifer born on or after 1st December 1934 . . .	10	5	3	2
<sup>1</sup> Knockbrea Challenge Cup, value £50, for the best Belted Galloway Animal, "Extra Stock" eligible to compete. <sup>2</sup> The Ian Hamilton Silver Challenge Cup, value £50, for the best Belted Galloway Animal of the sex opposite to that of the winner of the Knockbrea Challenge Cup, "Extra Stock" eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belted Galloway Herd-Book. Breeder of best Bull in Classes 31 and 32 ("Extra Stock" not eligible to compete)—The Silver Medal. Special Prizes for Cows from Attested Herds and from Grade "A" (Tuberculin Tested) or Certified Herds, drawn from Classes 33, 43, 44, 45, 52, 53, and 54. (See page 109.)							
PRIZE MONEY BY SOCIETY . . .				£100			

<sup>1</sup> This Cup was presented by Mrs Brown, Kirkbrea, Glasgow, for the best Belted Galloway animal registered in the Dun and Belted Galloway Cattle Breeders' Association Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Silver Medal as a memento of his winning the Trophy.

<sup>2</sup> This Cup was presented by General Sir Ian Hamilton, G.C.B. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

ENTRANCE FEES			PREMIUMS			
Members	Non-Members	CLASS	CATTLE			
			HIGHLAND			
			First	Second	Third	Fourth
			£	£	£	£
			Judge: Alexander C. M'Intyre			
			<i>President's Champion Medal for best Highland Animal</i>			
25/-	45/-	36	Bull born before 1st December 1933 . . . . .	15	10	5 3
25/-	45/-	37	Bull born on or after 1st December 1933 and before 1st December 1934 . . . . .	15	10	5 3
25/-	45/-	38	Bull born on or after 1st December 1934 . . . . .	12	8	4 2
25/-	45/-	39	Cow of any age with Calf at foot . . . . .	12	8	4 2
25/-	45/-	40	Heifer born on or after 1st December 1932 and before 1st December 1933 . . . . .	10	5	3 2
25/-	45/-	41	Heifer born on or after 1st December 1933 and before 1st December 1934 . . . . .	10	5	3 2
25/-	45/-	42	Heifer born on or after 1st December 1934 . . . . .	10	5	3 2
			<sup>1</sup> Perpetual Victory Challenge Cup, approximate value 50 Guineas, for the best Animal in the Male Classes, "Extra Stock" eligible to compete. Breeder of best Bull in Classes 36, 37, and 38 ("Extra Stock" not eligible to compete)—The Silver Medal. <sup>1</sup> Perpetual Victory Challenge Cup, approximate value 35 Guineas, for the best Animal in the Female Classes, "Extra Stock" eligible to compete.			
			PRIZE MONEY BY SOCIETY . . . . £178			

<sup>1</sup> Given by the Highland Cattle Society of Scotland.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
		<b>CATTLE</b>				
		<b>AYRSHIRE</b>				
		Judge: John Johnstone				
		1. To be eligible for competition in the Ayrshire Section Cows must have an authenticated Milk Yield, and younger Females (including Cows which have not completed their first lactation) and Bulls an authenticated Milking Pedigree, of a definite minimum amount.				
		2. The minimum amount referred to shall be as follows, calculated on the basis of a period between calvings of 52 weeks, and 8·8 per cent of butter fat:—				
		(a) Cows which have completed two or more lactations—700 gallons.				
		(b) Cows which have completed only one lactation—600 gallons.				
		(c) Younger Females and Bulls—an authenticated Milking Pedigree for dam and dam of sire on a similar basis.				
		3. In the case of Cows with two or more lactations the record lodged may be that for any year the Exhibitor may select.				
		4. In the case of a Cow which has no milking pedigree, and which has not completed her first lactation at date of entry, but is likely to calve again before date of Show, such Cow may be provisionally entered on her own milk yield produced within forty weeks after first calving, but when the Cow has calved again a further Certificate in terms of the Rules must be obtained and produced before the Cow is allowed to enter the judging ring. The latter Certificate is the standard of qualification, and failure to produce such will render the Cow liable to disqualification, and no entry money will be returned.				
		5. The evidence of Milk Yield and Milking Pedigree shall be in the form of a Certificate signed by the Secretary of the Scottish Milk Records Association. The Certificate, besides giving the actual yields, shall give these calculated on a uniform basis of a period of 52 weeks between calvings, and 8·8 per cent butter fat. This latter figure shall be communicated to the Judge before adjudicating.				
		In the case of an Exhibitor founding on the Milk Yield of any animal, or animals, made in England, said Exhibitor must forward a Certificate of Milk Yield from the Secretary of the County Milk Recording Society in which the Exhibitor resides, together with a Certificate from a competent analyst, stating that a butter-fat test had been made at least once every 28 days during the period of lactation, and with details of said butter-fat tests attached, to the Secretary of the Scottish Milk Records Association, who has undertaken to check the records and to certify same.				
		6. The authenticated Milk Yields and authenticated Milking Pedigrees shall appear in the Catalogue.				
		<i>N.B.—Certificates above referred to must be obtained from Mr John Howie, 55 Alloway Street, Ayr, and lodged with Entries.</i>				
		<i>President's Champion Medal for best Ayrshire Animal</i>				
25/-	45/-	43 <sup>1</sup> Cow in Milk,* born before 1933 . . . . .	12	8	4	2
25/-	45/-	44 <sup>1</sup> Cow in Milk,* born on or after 1st January 1933 . . . . .	10	7	3	2
25/-	45/-	45 <sup>1</sup> Cow of any age in Calf,* and due to calve before 1st December of the year of the Show . . . . .	10	7	3	2
25/-	45/-	46 Heifer * born on or after 1st June 1933, in Calf and due to calve before 1st December of the year of the Show . . . . .	10	7	3	2
25/-	45/-	47 Heifer * born in 1934 . . . . .	10	5	3	2
25/-	45/-	48 Heifer born in 1935 . . . . .	8	5	3	2

\* See Rules 33, 42, and 72.

<sup>1</sup> Cows in these Classes must have produced a calf within fifteen months prior to the Show.

ENTRY FEES		CLASS	CATTLE				PREMIUMS			
Members	Non-Members		AYRSHIRE—continued				First	Second	Third	Fourth
25/-	45/-	49	Bull born before 1934	.	.	.	£ 12	£ 8	£ 4	£ 2
25/-	45/-	50	Bull born in 1934	.	.	.	10	7	3	2
25/-	45/-	51	Bull born in 1935	.	.	.	8	5	3	2
<p><sup>1</sup> Cowhill Champion Cup, approximate value £30, for best Animal of the Ayrshire breed, entered with a number in the Herd-Book. The Cup to be won three times, not necessarily in succession, by the same person with different animals, before becoming the property of the winner. No animal which has already won the Cup shall be eligible to compete.</p> <p><sup>2</sup> Special Prize of £10 for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1936. "Extra Stock" eligible to compete. Breeder of best Bull of any age in Classes 49, 50, and 51 ("Extra Stock" not eligible to compete) —The Silver Medal.</p> <p><sup>2</sup> Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1936. "Extra Stock" eligible to compete.</p> <p>Special Prizes for Cows from Attested Herds and from Grade "A" (Tuberculin Tested) or Certified Herds, drawn from Classes 33, 43, 44, 45, 52, 53, and 54. (See page 109.)</p>										
PRIZE MONEY BY SOCIETY							£196			
CONTRIBUTED							20			

<sup>1</sup> Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd-Book Society, to be competed for annually at the Shows of the Highland and Agricultural Society of Scotland. Messrs James Howie & Sons, Muirside, Dumfries, who won this Cup outright in 1934, have kindly re-presented the Cup to the Society for competition on the same conditions as formerly.

<sup>2</sup> Given by the Ayrshire Cattle Herd-Book Society.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>CATTLE</b>						
<b>BRITISH FRIESIAN</b>						
Judges : John M'Kendrick ; J. L. Nisbet						
<i>President's Champion Medal for best British Friesian Animal</i>						
25/-	45/-	52	<sup>1</sup> Cow in Milk,* born in or before 1932 . . . . .	12	8	4 2
25/-	45/-	53	<sup>1</sup> Cow in Calf,* and not in Milk, born in or before 1932 . . . . .	10	5	3 2
25/-	45/-	54	<sup>1</sup> Cow in Milk,* born in 1933 or 1934 . . . . .	10	5	3 2
25/-	45/-	55	Heifer* born in 1934 . . . . .	10	5	3 2
25/-	45/-	56	Heifer born in 1935, before 1st July . . . . .	10	5	3 2
25/-	45/-	57	Heifer born in 1935, on or after 1st July . . . . .	10	5	3 2
25/-	45/-	58	Bull born in or before 1933 . . . . .	12	8	4 2
25/-	45/-	59	Bull born in 1934 . . . . .	10	5	3 2
25/-	45/-	60	Bull born in 1935 . . . . .	10	5	3 2
 <sup>2</sup> Edinburgh Corporation Perpetual Gold Challenge Cup for best British Friesian animal. "Extra Stock" eligible to compete.						
<sup>3</sup> The MacRobert Champion Silver Bell, value 50 Guineas, for the best Animal in the British Friesian Classes, registered in or eligible for entry in the British Friesian Cattle Society's Herd-Book. "Extra Stock" eligible to compete.						
<sup>4</sup> Silver Challenge Cup, value 50 guineas, for the best Group of three animals. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession. "Extra Stock" eligible to compete.						
Champion Prize of £5 given by the British Friesian Cattle Society for the best Female Animal exhibited. "Extra Stock" eligible to compete.						
Breeder of Best Bull of any age in Classes 58, 59, and 60 ("Extra Stock" not eligible to compete) —The Silver Medal.						

\* See Rules 83, 42, and 72.

<sup>1</sup> Cows in these Classes must have produced a calf within fifteen months prior to the Show.

<sup>2</sup> This Cup was presented by the City of Edinburgh to commemorate the Society's Hundredth Show. This year the Cup is offered for best British Friesian animal. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

<sup>3</sup> Presented by Lady Rachel Workman MacRobert, Douneside, Tarland. This Bell will become the property of the Exhibitor who shall win it three times, not necessarily in succession. The winner of the Bell on each occasion will receive a miniature replica in silver as a memento of winning the Bell. The Breeder of the winning animal will also receive a replica, provided he or she is not also the Exhibitor.

<sup>4</sup> Given by the British Friesian Cattle Society.

ENTRY  
FEES

## PREMIUMS

## CATTLE

BRITISH FRIESIAN—*continued.*

Champion Prize of £5 given by the British Friesian Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.

Special Prizes for Cows from Attested Herds and from Grade "A" (Tuberculin Tested) or Certified Herds, drawn from Classes 33, 43, 44, 45, 52, 53, and 54. (*See below.*)

PRIZE MONEY BY SOCIETY . . .	£152
<sup>1</sup> CONTRIBUTED . . .	50

## DAIRY COWS

## Special Prizes for Dairy Cows

Judges: John Johnstone; John M'Kendrick

(*To be judged at 10 30 A.M. on Wednesday, 24th June*)

Cows from Attested Herds and from Grade "A" (Tuberculin Tested) or Certified Herds drawn from Classes 33, 43, 44, 45, 52, 53, and 54 . . . 10

PRIZE MONEY BY SOCIETY . . .	£8
<sup>2</sup> CONTRIBUTED . . .	10

PRIZE MONEY BY SOCIETY . . .	£1309	0
CONTRIBUTED . . .	165	0
CUPS, MEDALS, &c.. . .	1339	5

**Total Prizes for Cattle**      **£2813    5**

[See Note as to EXTRA STOCK, p. 128.]

<sup>1</sup> Given by the British Friesian Cattle Society.

<sup>2</sup> Given by Messrs Brown & Polson, Ltd., Paisley.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<p style="text-align: center;"><b>* HORSES</b></p> <p style="text-align: center;"><b>CLYDESDALE</b></p> <p style="text-align: center;"><b>STALLION AND COLT</b></p> <p style="text-align: center;">Judges : George A. Marshall ; Andrew Renwick</p> <p style="text-align: center;">(To be judged at 9.30 A.M. on Tuesday, 23rd June)</p> <p style="text-align: center;"><i>President's Champion Medal for best Clydesdale Stallion or Colt</i></p>						
55/-	75/-	61	Stallion born before 1933 . . . . .	20	15	10 4
55/-	75/-	62	Entire Colt born in 1933 . . . . .	20	15	10 4
55/-	75/-	63	Entire Colt born in 1934 . . . . .	20	15	10 4
40/-	60/-	64	Entire Colt born in 1935 . . . . .	15	9	6 4
<p><sup>1</sup> Cawdor Challenge Cup, value 50 Guineas, for best Clydesdale Stallion or Colt, "Extra Stock" eligible to compete.</p> <p>Breeder of best Male Animal of any age in the above Classes ("Extra Stock" not eligible to compete)—The Silver Medal.</p> <p style="text-align: center;">PRIZE MONEY BY SOCIETY . . . £181</p>						

\* For prizes given by the Society, no animal is allowed to enter in more than one Class, except that horses entered in other Classes may also compete in the Jumping Classes.

<sup>1</sup> This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland (subject to the conditions of that Society) for the best Clydesdale Stallion or Colt registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes, at the Show at which it may be competed for. No Stallion rising five years old or upwards will be allowed to compete for this Cup unless proof be furnished to satisfy a Committee, appointed for this purpose by the Council of the Clydesdale Horse Society, that he has during the preceding season left at least 35 per cent of the mares served by him in foal. The Cup must be won four times by an Exhibitor with different animals (but not necessarily in consecutive years) before it becomes his absolute property. No animal which has won a Cawdor Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup, other than the absolute winner, shall, before delivery thereof is made to him, give security to the Clydesdale Horse Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Until the Cup be won outright, the winner on each occasion will receive the Clydesdale Horse Society's Silver Medal as a memento of his winning the Cup.

**Stallions and Colts, 2 years old and upwards, must be licensed  
for stud purposes. See Rule 39.**

ENTRY FEES			CLASS	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
<b>HORSES</b>							
<b>CLYDESDALE—continued</b>							
<b>GELDING</b>							
<b>Got by a Registered Clydesdale Stallion</b>							
<b>Judge: John M'K. M'Farlane</b>							
<i>(To be judged at 2.30 P.M. on Tuesday, 23rd June)</i>							
<i>President's Champion Medal for best Clydesdale Gelding</i>							
40/-	60/-	65	Gelding born before 1933 . . . .	15	9	6	4
40/-	60/-	66	Gelding born in 1933 . . . .	15	9	6	4
40/-	60/-	67	Gelding born in 1934 . . . .	15	9	6	4
40/-	60/-	68	Gelding born in 1935 . . . .	12	8	4	2
<sup>1</sup> The Meiklem Gold Challenge Cup, value 110 guineas, for best Clydesdale Gelding, to become the property of an Exhibitor who shall win it four times with different animals, but not necessarily in succession. "Extra Stock" eligible to compete. No animal which has already won the Cup is eligible to compete.							
<b>PRIZE MONEY BY SOCIETY</b>				<b>. £128</b>			

<sup>1</sup> Given by Mr William Meiklem, Bennoch Park, Kirkcaldy.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.



ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			<b>CLYDESDALE—continued</b>				
			<b>MARE AND FILLY</b>				
			Judges: G. M. Beck; John Stirling				
			(To be judged at 9.30 A.M. on Tuesday, 23rd June)				
			<i>President's Champion Medal for best Clydesdale Mare or Filly</i>				
55/-	75/-	69	Mare of any age, with Foal at foot, or due to foal before 31st July 1936 . . . . .	20	12	7	4
40/-	60/-	70	Yield Mare born before 1933 . . . . .	15	9	6	4
40/-	60/-	71	Yield Mare or Filly born in 1933 . . . . .	15	9	6	4
40/-	60/-	72	Filly born in 1934 . . . . .	15	9	6	4
40/-	60/-	73	Filly born in 1935 . . . . .	15	9	6	4
			<sup>1</sup> Cawdor Challenge Cup, value 50 Guineas, for best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.				
			<sup>2</sup> The "Angus" Perpetual Silver Challenge Cup, value 50 guineas, for the best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.				
			<sup>3</sup> William Taylor Memorial Prize of £10 and Certificate to the Breeder of the best Clydesdale Filly entered in Classes 72 and 73.				
			PRIZE MONEY BY SOCIETY . . . . .	£179			
			CONTRIBUTED PRIZE . . . . .	10			
			<b>Total Prize Money for Clydesdale Horses,</b>				
			<b>£498</b>				

<sup>1</sup> This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland (subject to the conditions of that Society) for the best Clydesdale Mare or Filly registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes, at the Show at which it may be competed for. The Cup must be won four times by an Exhibitor with different animals (but not necessarily in consecutive years) before it becomes his absolute property. No animal which has won a Cawdor Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup, other than the absolute winner, shall, before delivery thereof is made to him, give security to the Clydesdale Horse Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Until the Cup be won outright, the winner on each occasion will receive the Clydesdale Horse Society's Silver Medal as a memento of his winning the Cup.

<sup>2</sup> This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1935. On this occasion the Cup is offered for the best Clydesdale Mare or Filly.

the Society that he shall surrender same to the Society and deliver it at the Society's when called upon to do so.

<sup>3</sup> Given by William Taylor Memorial Committee.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**

ENTRY FEES		CLASS	HORSES	PREMIUMS		
Members	Non-Members			First	Second	Third
				£	£	£
			<b>HUNTER</b>			
			Judges : Major H. C. Meredith (Classes 74 to 81); E. G. E. Griffith (Classes 82 to 86)			
			(Classes 74 to 81 to be judged at 9.30 A.M. on Tuesday, 23rd June)			
			<i>President's Champion Medal for best Hunter</i> (Classes 74 to 85)			
55/-	75/-	74	Hunter Brood Mare, with Foal at foot, or due to foal before 31st July 1936 . . . . .	15	7	3
5/-	5/-	75	Foal, drawn from Class 74 . . . . .	7	4	2
40/-	60/-	76	Gelding born in 1933—in hand . . . . .	10	5	3
40/-	60/-	77	Filly born in 1933—in hand . . . . .	10	5	3
40/-	60/-	78	Gelding born in 1934—in hand . . . . .	10	5	3
40/-	60/-	79	Filly born in 1934—in hand . . . . .	10	5	3
40/-	60/-	80	Colt or Gelding born in 1935—in hand . . . . .	10	5	3
40/-	60/-	81	Filly born in 1935—in hand . . . . .	10	5	3
			[If there are less than three entries in any of the Classes 76 to 81, the Geldings or Colts and Fillies of the same age will be judged as one Class.]			
			(Classes 82 to 86 to be judged at 2 P.M. on Tuesday, 23rd June)			
40/-	60/-	82	Mare or Gelding born before 1932, to carry 14 stone 7 lb. and over—in saddle . . . . .	15	10	5
40/-	60/-	83	Mare or Gelding born before 1932, to carry 13 stone and under 14 stone 7 lb.—in saddle . . . . .	15	10	5
40/-	60/-	84	Mare or Gelding born before 1932, to carry under 13 stone—in saddle . . . . .	15	10	5
40/-	60/-	85	Mare or Gelding born in 1932—in saddle . . . . .	15	10	5
40/-	60/-	86	Hack of Hunter Type, born in or before 1932, not exceeding 15.2 hands—in saddle . . . . .	8	5	3
			<sup>1</sup> Fife and Kinross Perpetual Gold Challenge Cup, value £200, for best Hunter. "Extra Stock" eligible to compete.			

<sup>1</sup> This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar-Fife in 1912. This year the Cup is offered for the best Hunter. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 38.**

ENTRY  
FEES

SS

## PREMIUMS

Mans.  
Non-  
Mans.

## HORSES

HUNTER—*continued*

| £ | 8

<sup>1</sup> **Dumfries Centenary Silver Challenge Cup**, value £100, for best Hunter. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession, at Shows at which there are not less than three Saddle Classes. "Extra Stock" not eligible to compete.

<sup>2</sup> **Best Hunter Filly**, entered in Classes 77, 79, and 81, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award—Champion Gold Medal, value £5.

<sup>3</sup> The following **Special Prizes** are offered by the Buccleuch Hunter Breeding Society. "Extra Stock" eligible to compete:—

For **Mares** with foal at foot which have been served or will be served this season by "Corbridge"—£7 and £3.

For best **Foal** by "Corbridge"—£5.

For best **Gelding** born in 1933 by "Pennant"—£5.

For best **Filly** born in 1933 by "Pennant"—£5.

For best **Gelding** born in 1934 by "Pennant"—£5.

For best **Filly** born in 1934 by "Pennant"—£5.

For best **Colt** or **Gelding** born in 1935 by "Corbridge"—£5.

For best **Filly** born in 1935 by "Corbridge"—£5.

For best **Mare** or **Gelding** born in 1932—in saddle—by "Barbican" or "Pennant"—£5.

<sup>3</sup> The **Cowdenknowes Perpetual Challenge Cup** for best Hunter entered in Classes 74 to 81, and 85. Confined to animals awarded the Special Prizes offered by the Buccleuch Hunter Breeding Society. "Extra Stock" eligible to compete.

PRIZE MONEY BY SOCIETY . . . £282

<sup>3</sup> CONTRIBUTED . . . 50

<sup>1</sup> Presented by Members of the Dumfriesshire Hunt in 1930 to commemorate the centenary of the Highland Society's first Show at Dumfries in 1830.

<sup>2</sup> Given by the Hunters' Improvement and National Light Horse Breeding Society.

<sup>3</sup> Given by Buccleuch Hunter Breeding Society.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**

ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			<b>HORSES</b>				
			<b>* 1 HIGHLAND and WESTERN ISLAND PONIES</b>				
			Judge: Major William Logan				
			<i>President's Champion Medal for best Highland or Western Island Pony</i>				
			<i>(To be judged at 2 P.M. on Tuesday, 23rd June)</i>				
40/-	60/-	87	Stallion born before 1934, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	88	Entire Colt born on or after 1st January 1934, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	89	Mare, any age, not exceeding 14.2 hands, with Foal at foot, or due to foal before 31st July 1936	8	5	3	2
40/-	60/-	90	Yeld Mare or Filly born before 1934, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	91	Filly born on or after 1st January 1934, not exceeding 14.2 hands	8	5	3	2
			<b>2 Kinmonth Perpetual Gold Challenge Quaich</b> for best Highland or Western Island Pony. An animal winning the Quaich will become ineligible again to compete.				
			<b>3 Special Prize of £8</b> given by Highland Pony Society for best Male Animal not exceeding 14.2 hands, entered in Classes 87 and 88. "Extra Stock" not eligible to compete.				
			<b>3 Special Prize of £8</b> given by Highland Pony Society for best Female Animal not exceeding 14.2 hands, entered in Classes 89, 90, and 91. "Extra Stock" not eligible to compete.				
			<b>4 Special Prize of £5</b> for best Stallion entered in Class 87. "Extra Stock" eligible to compete.				
			<b>4 Special Prize of £5</b> for best Entire Colt entered in Class 88.				
			PRIZE MONEY BY SOCIETY . . . £50				
			CONTRIBUTED PRIZES . . . 66				

\* See Rule 28.

1 The Department of Agriculture for Scotland give £40 towards prizes for Highland and Western Island Ponies.

2 This Quaich—along with a sum of money to provide a miniature replica in silver annually—was presented by Mrs Moncreiff Wright, Kinmonth, Bridge of Earn, in memory of her husband, the late John Moncreiff Wright of Kinmonth. The winner of the Quaich shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Quaich on each occasion will receive a miniature replica in silver as a memento of his, or her, winning the Quaich. An Exhibitor who shall win the Quaich five times, not necessarily in succession, will receive in lieu of a miniature a full-size replica in silver.

3 The animals winning these Prizes must be entered or accepted for entry in the Highland Section of the National Pony Stud-Book. Competition to be strictly confined to animals passed sound and free from hereditary disease.

4 Given by the National Pony Society.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**

ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
<b>HORSES</b>							
<b>SHETLAND PONIES</b>							
Judge: Walter A. Aitkenhead							
(To be judged at 2.30 P.M. on Tuesday, 23rd June)							
(All to be shown in hand)							
<i>President's Champion Medal for best Shetland Pony</i>							
35/-	55/-	92	Stallion, not exceeding 10½ hands, born before 1933	8	5	3	2
35/-	55/-	93	Entire Colt, not exceeding 10½ hands, born in 1933 or 1934	8	5	3	2
35/-	55/-	94	Mare, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1936	8	5	3	2
35/-	55/-	95	Yeld Mare, not exceeding 10½ hands	8	5	3	2
35/-	55/-	96	Filly, not exceeding 10½ hands, born in 1933 or 1934	8	5	3	2
<sup>1</sup> Perpetual Silver Challenge Cup, value £50, for best Group of Shetland Ponies drawn from the ordinary Classes, consisting of one male and two females. "Extra Stock" eligible to compete. <sup>2</sup> Silver Medal for the best Shetland Pony of the sex opposite to that of the winner of the President's Medal, entered or eligible for entry in the Shetland Pony Stud-Book.							
PRIZE MONEY BY SOCIETY . . . £90							

<sup>1</sup> Presented by a few members of the Shetland Pony Stud-Book Society. The winner on each occasion will receive a Shetland Pony Stud-Book Society's Miniature Silver Medal as a memento of winning the Cup.

<sup>2</sup> Given by the Shetland Pony Stud-Book Society.

**Stallions and Gots, 2 years old and upwards, must be licensed for stud purposes. See Rule 32.**

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			<b>HORSES</b>				
			<b>RIDING PONIES</b>				
			Judge : E. G. E. Griffith				
			(To be judged at 10.30 A.M. on Wednesday, 24th June)				
5/-	5/-	97	Mare or Gelding, any age, over 13.2 hands, and not exceeding 14.2 hands—in saddle . . . . .	5	3	2	—
5/-	5/-	98	Mare or Gelding, any age, over 12 hands and not exceeding 13.2 hands—in saddle—to be ridden by boy or girl not exceeding 14 years of age . . . . .	5	3	2	—
5/-	5/-	99	Mare or Gelding, any age, not exceeding 12 hands—in saddle—to be ridden by boy or girl not exceeding 12 years of age . . . . .	5	3	2	—
			PRIZE MONEY BY SOCIETY . . . . .	£30			
			[Ponies in the above Classes to be exhibited on Wednesday only. They must be in the Showyard not later than 9 A.M. on Wednesday and may leave immediately after the afternoon Parade. Boxes are not provided for these ponies.]				
			<hr/>				
			PRIZE MONEY BY SOCIETY . . . . .	£940	0		
			CONTRIBUTED . . . . .	126	0		
			CUPS, MEDALS, &c. . . . .	748	0		
			<b>Total Prizes for Horses</b> . . . . .	<b>£1814</b>	<b>0</b>		
			[See Note as to EXTRA STOCK, p. 128]				

# JUMPING COMPETITIONS

## SPECIAL REGULATIONS

(See also the Regulations on pages 79 to 88)

1. Jumping Competitions will take place on the afternoons of Wednesday, Thursday, and Friday 24th, 25th, and 26th June, and on the evenings of Wednesday and Thursday, 24th and 25th June.
2. Entries for each afternoon Competition will close at the Secretary's Office in the Showyard at 5 P.M. on the preceding day. Entries for Evening Jumping may be received until 5 P.M. on the evening of the Competition.
3. Entry Fees.—Wednesday and Thursday afternoons, £1; Friday, 10s. Evening Jumping, 10s.
4. Accommodation for jumping horses will be provided as follows: Covered shed in which to stand during the day free of charge; or, on application to the Secretary not less than ten days before the opening of the Show, boxes will be provided at a charge (in addition to the Entry Fee) of £1, which must be paid along with the Entry Fee at the time of application.
5. Horses entered for jumping only need not enter the Showyard till 12 noon on the day of Competition, and may leave the Showyard at the close of the jumping.
6. The Jumps may consist of Single Hurdle, Gate, Double Hurdle, Wall, and Water Jump, power being reserved by the Society to alter these, as well as the Handicaps, as may be thought desirable.

ENTRY FEE	CLASS		First	Second	Third	Fourth	Fifth
<b>WEDNESDAY.</b>							
<b>AFTERNOON.</b>							
20/-	1	Horse or Pony, any height . . . . .	£ 20	£ 15	£ 10	£ 5	£ 3
<b>EVENING.</b>							
10/-	2	Horse or Pony, any height, confined to competitors permanently resident in Scotland. The Horse or Pony to have been the property of the competitor since 1st May 1936 . . . . .	10	8	5	3	2
<b>THURSDAY.</b>							
<b>AFTERNOON.</b>							
20/-	3	Horse or Pony, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the first prize, and 4 inches for the winner of the second prize in Class 1 . . . . .	20	15	10	5	3
<b>EVENING.</b>							
10/-	4	Horse or Pony, any height . . . . .	10	8	5	3	2
<b>FRIDAY.</b>							
<b>AFTERNOON.</b>							
10/-	5	Horse or Pony, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the first prize, and 4 inches for the winner of the second prize in either of Classes 1 or 3—4 inches extra for the winner of the two first prizes in Classes 1 and 3 . . . . .	15	10	5	3	2
		Champion Prize for most points in Prizes with one horse in Classes 1, 3, and 5—First Prize to count five points; Second Prize, four points; Third Prize, three points; Fourth Prize, two points; and Fifth Prize, one point—the money to be evenly divided in the event of a tie . . . . .	10	—	—	—	—
<b>Total Prize Money for Jumping, £207.</b>							

ENTRY FEES		CLASS	PREMIUMS				
Members	Non-Members		First	Second	Third	Fourth	
			£	£	£	£	
S H E E P							
*BLACKFACE							
Judges: J. W. Alexander; James Macdonald							
President's Champion Medal for best Blackface Sheep							
15/-	25/-	100	Tup three shear and over	12	8	4	2
15/-	25/-	101	Tup two shear	12	8	4	2
15/-	25/-	102	Shearling Tup	12	8	4	2
15/-	25/-	103	Tup Lamb	5	3	2	-
15/-	25/-	104	Ewe above one shear (born before 1935), with Lamb at foot	10	5	3	2
15/-	25/-	105	Shearling Ewe or Gimmer (born in 1935)	10	5	3	2
15/-	25/-	106	Ewe Lamb	5	3	2	-
<p><sup>1</sup> The "Lochlane" Silver Challenge Cup, value £50, for best Group of three Blackface Sheep, consisting of Ewe, Gimmer, and Ewe Lamb, drawn from above Classes, "Extra Stock" eligible to compete.</p> <p><sup>2</sup> The "James Archibald" Prize, of about £20, for the best Sheep in the Blackface Classes (excluding Lambs), "Extra Stock" eligible to compete.</p>							
PRIZE MONEY BY SOCIETY				£138			
CONTRIBUTED PRIZE				20			

\* Formal Declarations must be made at time of entry that the conditions as regards clipping, &c., have been strictly adhered to (see Rule 43).

<sup>1</sup> Presented by Mr and Mrs Francis A. Rottenburg, Lochlane, Crief. The Cup will become the property of an Exhibitor who shall win it five times, not necessarily in succession.

<sup>2</sup> This Prize consists of the annual free income from a fund of £600, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overshiels, Stow.



ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>SHEEP</b>						
<b>CHEVIOT</b>						
Judge : J. Jasper Dodd ; Walter Mundell						
<i>President's Champion Medal for best Cheviot Sheep</i>						
15/-	25/-	107	Tup above one shear . . . . .	12	8	4 2
15/-	25/-	108	Shearling Tup . . . . .	12	8	4 2
15/-	25/-	109	Tup Lamb . . . . .	5	3	2 —
15/-	25/-	110	Ewe above one shear, with Lamb at foot . . . . .	10	5	3 2
15/-	25/-	111	Shearling Ewe or Gimmer . . . . .	10	5	3 2
15/-	25/-	112	Ewe Lamb . . . . .	5	3	2 —
<sup>1</sup> Renfrewshire Perpetual Gold Challenge Cup, value £250, for best Cheviot Sheep, "Extra Stock" eligible to compete. <sup>2</sup> Borthwick Perpetual Challenge Cup, value £25, gifted by Mr J. Borthwick, for best Sheep in the Cheviot Classes, "Extra Stock" eligible to compete.						
PRIZE MONEY BY SOCIETY . . . £112						

<sup>1</sup> This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the county of Renfrew in 1913. This year the Cup is offered for the best Cheviot Sheep. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

<sup>2</sup> Given by the Cheviot Sheep Society.

ENTRY FEES			CLASS	PREMIUMS			
Members	Non-Members	First		Second	Third	Fourth	
				£	£	£	£
SHEEP							
BORDER LEICESTER							
Judges : Harry Findlay ; John Young							
<i>President's Champion Medal for best Border Leicester Sheep</i>							
15/-	25/-	113	Tup above one shear . . . . .	12	8	4	2
15/-	25/-	114	Shearling Tup . . . . .	12	8	4	2
15/-	25/-	115	Tup Lamb . . . . .	10	5	3	2
15/-	25/-	116	Ewe above one shear . . . . .	10	5	3	2
15/-	25/-	117	Shearling Ewe or Gimmer . . . . .	10	5	3	2
15/-	25/-	118	Ewe Lamb . . . . .	5	3	2	—
<sup>1</sup> Tweeddale Gold Medal, value about £25, for best Border Leicester Tup, "Extra Stock" eligible to compete.							
<sup>2</sup> Gold Medal for best Male Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "Extra Stock" not eligible.							
<sup>2</sup> Gold Medal for best Female Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "Extra Stock" not eligible.							
PRIZE MONEY BY SOCIETY . . .				£122			

<sup>1</sup> Annual Free Income from Fund of £500.<sup>2</sup> Given by the Society of Border Leicester Sheep Breeders.

ENTRY FEES		CLASS	SHEEP HALF-BRED	PREMIUMS		
Members	Non-Members			First	Second	Third
			Judge: William I. Elliot	£	£	£
			<i>President's Champion Medal for best pen of Half-Bred Sheep</i>			
15/-	25/-	119	Shearling Tup . . . . .	10	7	3
15/-	25/-	120	Ewe above one shear . . . . .	10	5	2
15/-	25/-	121	Shearling Ewe or Gimmer . . . . .	10	5	2
15/-	25/-	122	Ewe Lamb . . . . .	5	3	2
15/-	25/-	123	Three Gimmers, clipped after 1st May 1936, and showing Clipping Buist . . . . .	5	3	2
15/-	25/-	124	Three Ewe Lambs . . . . .	5	3	2
			<sup>1</sup> Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best pen of Half-Bred Sheep, "Extra Stock" eligible to compete.			
			PRIZE MONEY BY SOCIETY . . . . .	£84		
			<b>OXFORD DOWN</b>			
			Judge: Alexander Wyllie			
			(All sheep to be entered or eligible for entry in the Flock-Book)			
			<i>President's Champion Medal for best Oxford Down Sheep</i>			
15/-	25/-	125	Shearling Tup . . . . .	8	5	3
15/-	25/-	126	Shearling Ewe or Gimmer . . . . .	8	5	3
15/-	25/-	127	Tup Lamb . . . . .	8	5	3
15/-	25/-	128	Ewe Lamb . . . . .	5	3	2
			PRIZE MONEY BY SOCIETY . . . . .	£47		
			<sup>2</sup> CONTRIBUTED PRIZES . . . . .	11		

<sup>1</sup> This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. On this occasion the Cup is offered for the best pen of Half-Bred Sheep. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society, and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Trophy.

<sup>2</sup> Given by Oxford Down Sheep-Breeders' Association.

ENTRY FEES		CLASS	SHEEP  SUFFOLK  Judge : Captain R. S. Hall  (All sheep to be entered or eligible for entry in the Flock-Book)  President's Champion Medal for best Suffolk Sheep	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
15/-	25/-	129	Tup one shear and over . . . . .	10	7	3	1
15/-	25/-	130	Shearling Ewe or Gimmer . . . . .	10	5	2	1
15/-	25/-	131	Tup Lamb . . . . .	10	5	2	1
15/-	25/-	132	Ewe Lamb . . . . .	5	3	2	—
15/-	25/-	133	Tup Lamb—untrimmed . . . . .	5	3	2	—
15/-	25/-	134	Ewe Lamb—untrimmed . . . . .	5	3	2	—
<sup>1</sup> Silver Challenge Cup, value £15, offered by the Suffolk Sheep Society for best Group of Suffolk Sheep, consisting of one Tup, one shear and over, one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor— <i>drawn from above Classes</i> . The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession.							
PRIZE MONEY BY SOCIETY . . . . .				£64			
<sup>1</sup> CONTRIBUTED . . . . .				23			
WENSLEYDALE LONGWOOL							
Judge : R. H. Milner							
President's Champion Medal for best Wensleydale Longwool Sheep							
15/-	25/-	135	Shearling Tup . . . . .	6	4	2	—
15/-	25/-	136	Shearling Ewe or Gimmer . . . . .	5	3	2	—
PRIZE MONEY BY SOCIETY . . . . .				£12			
<sup>2</sup> CONTRIBUTED . . . . .				10			

<sup>1</sup> Given by the Suffolk Sheep Society.<sup>2</sup> Given by Wensleydale Longwool Sheep-Breeders' Association.

ENTRY FEES			CLASS	PREMIUMS		
Members	Non-Members	First		Second	Third	
<div>SHEEP</div> <div>FAT SHEEP</div> <div>Judge: William I. Elliot</div> <div>President's Champion Medal for best pen of Fat Sheep</div>						
15/-	25/-	137	Three Fat Lambs, any breed or cross, dropped in the year of the Show . . . . .	5	3	2
[Exhibitors of Fat Sheep must state the breed of sire and dam when making their entries.]						
PRIZE MONEY BY SOCIETY . . .				£10		
<div>SHEPHERDS' PACK SHEEP</div> <div>Judges: The Judges of the respective Breeds</div> <div>Silver Medal for best Sheep in each section</div>						
BLACKFACE						
5/-	5/-	138	Ewe above one shear, with her Lamb at foot . . . . .	3	2	1
5/-	5/-	139	Shearling Ewe or Gimmer . . . . .	3	2	1
5/-	5/-	140	Ewe Lamb . . . . .	3	2	1
CHEVIOT						
5/-	5/-	141	Ewe above one shear, with her Lamb at foot . . . . .	3	2	1
5/-	5/-	142	Shearling Ewe or Gimmer . . . . .	3	2	1
5/-	5/-	143	Ewe Lamb . . . . .	3	2	1
HALF-BRED						
5/-	5/-	144	Ewe above one shear, with her Lamb at foot . . . . .	3	2	1
5/-	5/-	145	Shearling Ewe or Gimmer . . . . .	3	2	1
5/-	5/-	146	Ewe Lamb . . . . .	3	2	1
PRIZE MONEY BY SOCIETY . . .				£54		
[Animals entered in these Classes cannot also be entered in the ordinary Classes.]						
PRIZE MONEY BY SOCIETY . . .				£643 0		
CONTRIBUTED . . . . .				64 0		
CUPS, MEDALS, &c. . . . .				435 0		
Total Prizes for Sheep				£1142 0		
[See Note as to EXTRA STOCK, p. 128.]						

ENTRY FEES		CLASS	GOATS			PREMIUMS		
Members	Non-Members		Judge : Mrs G. M. Soames			First	Second	Third
			REGULATIONS FOR GOAT CLASSES.			£	£	£
			<p>The animals will be milked dry at 6 o'clock on the evening previous to the opening of the Show, in the presence of, and to the satisfaction of, the Steward or a representative of the Society duly authorised by him.</p> <p>All exhibits must be registered either in the Herd-Book, Foundation Book or Show Register of the British Goat Society, in the name of the Exhibitor (the registered number being quoted on the entry form), or, if previously entered or owned by someone other than the Exhibitor, a transfer of ownership must be registered with the British Goat Society.</p>					
			<i>President's Champion Medal for best animal in the Goat Classes</i>					
5/-	10/-	147	Female Goat, any age, in milk, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book . . . . .			3	2	1
5/-	10/-	148	Female Goat, any age, in milk, entered in or eligible for the Saanen Section or the British Saanen Section or Register of the Herd-Book . . . . .			3	2	1
5/-	10/-	149	Female Goat, any age, in milk. Any other Variety			3	2	1
5/-	10/-	150	Goatling, over one but not exceeding two years, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book . . . . .			3	2	1
5/-	10/-	151	Goatling, over one but not exceeding two years Any other variety . . . . .			3	2	1
5/-	10/-	152	Female Kid, not exceeding one year. Any Variety			3	2	1
5/-	10/-	153	Male Kid, not exceeding one year. Any Variety . . . . .			3	2	1
5/-	10/-	154	Milking Competition, for quality, open to Classes 147, 148, and 149 . . . . .			3	2	1
5/-	10/-	155	Milking Competition, for quantity, open to Classes 147, 148, and 149 . . . . .			3	2	1
			<sup>1</sup> Challenge Cup, value 20 Guineas, for the best Female Goat in the Show.					

The Competition for Goats is recognised by the British Goat Society, Roydon Road, Diss, Norfolk, which will give Challenge Certificates (qualifying for a Championship) for the best Female Goat over two years that has borne a kid; for the best dual purpose Goat over two years that has borne a kid; and a Bronze Medal for the best female exhibit in Classes 147 to 152 inclusive.

<sup>1</sup> Given by the late Lord Dewar, London—to be competed for annually.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
		GOATS			
		REGULATIONS FOR MILKING COMPETITION (CLASSES 154 AND 155).	£	£	£
		<i>Goats entered for this Competition must be entered in both the Quality and Quantity Classes.</i>			
		The animals will be milked at 7 P.M. on Wednesday, 24th June, at an appointed place in the order arranged by the Steward, and the milk of the next twenty-four hours will be taken for the Quality and Quantity Milking Competitions. The hours of milking shall be 7 A.M. and 7 P.M. on Thursday, 25th June.			
		The prizes will be awarded according to the following scale of points:—			
		For each pound of milk . . . . . 1 point.			
		For each complete 10 days the Goat has been in milk, with a maximum of 3.6 points $\frac{1}{10}$ of a point.			
		For each $\frac{1}{4}$ lb. of fat in the milk . . . . . 5 points.			
		In cases where the milk contains less than 3 per cent of fat 1 point will be deducted.			
		In the Quantity Milking Competition points will be awarded for quantity and lactation only.			
		The period of lactation to be calculated from the date of kidding to the first day of the Show. No prize will be awarded to a Goat giving less than 5½ lbs. of milk per day.			
		Fractions of lbs. of milk and percentages of fat to be worked out in decimals and added to the total points.			
		A Certificate giving the last date of kidding, signed by the owner of the Goat exhibited, or his Agent, must in every case be brought to the Steward of Goats as soon as possible after the animal has arrived in the Showyard. Any Goat that has not kidded within two years preceding the date of the Show may not compete.			
		The milk yielded by Goats in the Showyard shall be the property of the Society.			
		<b>Note.</b> —No animal is allowed to compete in more than one Class, except that Goats entered in Classes 147, 148, and 149 may also be entered in Classes 154 and 155.			
		PRIZE MONEY BY SOCIETY . . . . . £42 0			
		DEPARTMENT OF AGRICULTURE FOR SCOTLAND . . . . . 12 0			
		CUP . . . . . 21 0			
		<b>Total Prizes for Goats . . . . . £75 0</b>			
		[See Note as to EXTRA STOCK, p. 128.]			

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		F-1	Second	Third	
			£	£	£	
<b>* PIGS</b>						
<b>LARGE WHITE</b>						
Judge : George A. Bruce						
(All Large White Pigs to be entered or eligible for entry in the Herd-Book of the National Pig-Breeders' Association)						
<i>President's Champion Medal for best Large White Pig</i>						
15/-	25/-	156	Boar born before 1935	8	4	2
15/-	25/-	157	Boar born in 1935 before 1st July	8	4	2
15/-	25/-	158	Boar born in 1935 on or after 1st July	6	4	2
15/-	25/-	159	Boar born in 1936	6	3	1
15/-	25/-	160	Sow born before 1935	8	4	2
15/-	25/-	161	Sow born in 1935 before 1st July	8	4	2
15/-	25/-	162	Sow born in 1935 on or after 1st July	6	4	2
15/-	25/-	163	Sow born in 1936	6	3	1
 <sup>1</sup> Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best Large White Pig, "Extra Stock" eligible to compete.						
<sup>1</sup> Gold Medal, value £5 (or cash), for best Large White Boar, "Extra Stock" eligible to compete.						
<sup>2</sup> Gold Medal, value £5 (or cash), for best Large White Sow, "Extra Stock" eligible to compete.						
<sup>2</sup> Special Prizes for Groups of four Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the Group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete.						
				5	3	2
PRIZE MONEY BY SOCIETY				£95		
<sup>2</sup> CONTRIBUTED				15		

\* See Rule 35.

<sup>1</sup> This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society, and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Trophy.

<sup>2</sup> Given by the National Pig-Breeders' Association.



ENTRY FEES			CLASS			PREMIUMS		
Members	Non-Members					First	Second	Third
						£	£	£
<b>PIGS</b>								
<b>LARGE BLACK</b>								
Judge: Hubert Groom								
<i>President's Champion Medal for best Large Black Pig</i>								
15/-	25/-	164	Boar born before 1936	.	.	8	4	2
15/-	25/-	165	Boar born in 1936	.	.	6	3	1
15/-	25/-	166	Sow born before 1935	.	.	8	4	2
15/-	25/-	167	Sow born in 1935	.	.	8	4	2
15/-	25/-	168	Sow born in 1936	.	.	6	3	1
<sup>1</sup> Silver Medal for the best Large Black Boar.								
<sup>1</sup> Silver Medal for the best Large Black Sow.								
PRIZE MONEY BY SOCIETY . . . £57								
<sup>1</sup> CONTRIBUTED PRIZES . . . 5								
<hr/>								
PRIZE MONEY BY SOCIETY . . £152 0								
CONTRIBUTED . . . 20 0								
CUPS, MEDALS, &c. . . 60 0								
<b>Total Prizes for Pigs . . £232 0</b>								
For Conditions of the Scottish Bacon Pig Competition, see next page.								

<sup>1</sup> Given by the Large Black Pig Society.**EXTRA STOCK**

(FORMER WINNERS NOT ELIGIBLE FOR ORDINARY CLASSES)

Former winners not eligible for Ordinary Classes may be exhibited as Extra Stock, and may receive Awards as follows:—

	£	£	£
<b>Cattle</b>	10	5	3
<b>Horses</b> —Clydesdales and Hunters . . . . .	10	5	3
Hack of Hunter type, Highland and Western Island Ponies, and Shetland Ponies . . . . .	5	3	2
Riding Ponies (Classes 97 to 99) . . . . .	3	2	1
<b>Sheep</b> —Blackface, Cheviot, and Border Leicester . . . . .	5	3	2
Other breeds . . . . .	3	2	1
<b>Goats and Pigs</b> . . . . .	3	2	1

Animals entered as Extra Stock are eligible to compete for the President's Medals, whether former winners of these Medals or not. They are also eligible to compete for Special Prizes where the conditions of these Prizes permit.

While every endeavour will be made to see that former winners are correctly entered in the Catalogue as "Extra Stock," the Society accepts no responsibility for this, it being the duty of Exhibitors to state clearly on the Entry Form the Show at which the animal became disqualified for the Ordinary Classes. If an animal appears in the Catalogue as entered in an Ordinary Class which should appear as "Extra Stock," it cannot thereafter be transferred to the "Extra Stock" Section.

*Entry Fees—same as corresponding Classes.*

## SCOTTISH BACON PIG COMPETITION

Judges: Stage I.—J. H. Birch

Stages II. and III.—Joseph Kirkpatrick; Edgar Kirkpatrick

### CONDITIONS.

#### ENTRIES.

Each entry shall consist of one pig only. No exhibitor may forward more than two entries. There will be no restrictions regarding age or breeding. The pigs entered should weigh not less than 195 lb. and not more than 225 lb. on the opening day of the Show, and any pig outwith these weights will be disqualified from taking part in the Live Stage judging. It is a primary condition that all pigs must be suitable for bacon-curing purposes.

#### FEEDING.

It is desired that, where possible, exhibitors should provide a Statement of Rations (constituents and percentages) fed during the month prior to showing.

#### JUDGING.

The Competition will be arranged in three stages, and judging will take place in each, namely :—

Stage I. The Live Pigs—at the Highland and Agricultural Society's Show, Melrose.

Stage II. Carcasses  
Stage III. Bacon—Wiltshire Sides } at the Bacon Factory, Thornhill, Dumfriesshire.

No points will be given in Stage I., but separate Prize Money will be awarded. All pigs entered must, however, go forward for all three stages.

#### PRIZES.

*Prize Money for Stage I.:* First, £4; Second, £3; Third, £2; Fourth, £1; Fifth, £1.

The aggregate points scored in Stages II. and III. will constitute the *Final Awards*, with seven Money Prizes and two Special Prizes: First, £8, Silver Cup and Silver Medal; Second, £6; Third, £4; Fourth, £3; Fifth, £2; Sixth, £1; and Seventh, £1. The total Prize Money (£36) and Silver Medal are offered by the Highland and Agricultural Society of Scotland.

The Silver Cup will become the property of the Exhibitor who shall win it three times, not necessarily in succession.

Prize Cards will be awarded in Stage I. and for the Final Awards.

### ENTRY FEE.

There will be an Entry Fee of 5s. for each entry of one pig.

### CARE AND FEEDING OF PIGS.

If necessary, arrangements will be made to have a herdsman in attendance on the pigs while at the Show. Five days' supply of straw, hay, grass, and tares will be provided by the Society. Any additional fodder or other kinds of food required will be supplied at fixed prices in the Forage-yard. The Forage-yard will close at 1.30 P.M. on Friday, the last supply to be given to attendants then; and if any extra supply is required on account of stock remaining in the Yard after the close of the Show, notice must be given to the Forage Steward not later than 5 o'clock on Thursday. Any servant removing bedding from an adjoining pen will be fined in double the amount taken. Exhibitors may bring their own Pig Meal to the Yard, but not *grass, tares, hay, or straw.*

### GENERAL REGULATIONS.

All pigs suitable for the manufacture of bacon will be graded in accordance with the Pigs Marketing Scheme measurements, and paid for at grade price.

The General Regulations of the Highland and Agricultural Society applicable to Stock at the Show shall apply to exhibits in the Bacon Pig Competition in all its stages.

If any part of a carcass, other than head and offal, be condemned, or if a carcass be graded "C" or under (1936 grading regulations of the Pigs Marketing Scheme), the exhibit so condemned or graded will be automatically disqualified from taking any further part in the Competition.

A protest having reference to exhibits in any of the three stages of the Competition may be lodged by any persons interested. Protests having reference to exhibits in Stage I. of the Competition must be lodged in writing with the Secretary of the Highland and Agricultural Society at his office in the Showyard not later than 9 A.M. on Wednesday the second day of the Show, and parties must be in attendance at the Secretary's office in the Showyard at 9.30 A.M. that day, when protests may be disposed of.

Protests having reference to the exhibits in Stages II. and III. of the Competition must be lodged in writing with Mr H. R. Macrae, Pigs Marketing Board, 124 St Vincent Street, Glasgow, C.2. No protests in regard to these stages will be entertained unless lodged with Mr H. R. Macrae within a period of forty-eight hours from the time of the adjudication of the stage concerned.

Each protest must state specifically the grounds of objection and must be accompanied by a deposit of £2, 2s., which deposit may, if the objection be over-ruled, be forfeited. Protests may be lodged

Entry forms may be obtained from the Secretary, Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12, or from Mr H. R. Macrae, Pigs Marketing Board, 124 St Vincent Street, Glasgow, C.2. Entry forms when completed should be forwarded with entry money to Mr H. R. Macrae.

**Entries close on Thursday, 28th May.**

**SCALE OF POINTS.**—*Stages II. and III.*

STAGE II.										Points
(a)	Back fat	.	.	.	.	.	.	.	.	20
(b)	Length of side	.	.	.	.	.	.	.	.	20
(c)	Belly thickness	.	.	.	.	.	.	.	.	20
(d)	Killing percentage*	.	.	.	.	.	.	.	.	20
(e)	General	.	.	.	.	.	.	.	.	20
										<hr/> 100

\* In order that this may be obtained accurately, the pigs will be re-weighed on Friday afternoon of the Show and, apart from the morning food, Exhibitors should not feed their pigs before this weighing takes place.

STAGE III.		Points
(a) Texture and colour of fat	.	20
(b) Texture, colour, and proportions of lean	.	20
(c) Percentage proportions of trade cuts	.	20
(d) Percentage of cured bacon to carcass weight	.	20
(e) Flavour	.	10
(f) General	.	10
		<hr/> 100

## \* POULTRY

Entries close 13th May

Judges: David Reid, Classes 1 to 22 and 41 to 63; Michael Harrison, Classes 23 to 26, 64 to 83 and 88 to 102; John Wharton, Classes 27 to 40, 84 to 87 and 103 to 123

<sup>1</sup> **Champion Challenge Silver Salver**, value £30, for the best exhibit in the Poultry Classes.

*First Premium*—TWENTY SHILLINGS; *Second Premium*—TEN SHILLINGS. In each Class in which there are four or more entries a Third Prize of Five Shillings may be awarded, provided there is sufficient merit in the pens. In addition to the Premiums, the Judges may award *one* Very Highly Commended, *one* Highly Commended, and as many Commended tickets in each Class as they consider justified by the number and merit of the entries.

*Champion Silver Medals* are offered as follows:—

- |                                |  |
|--------------------------------|--|
| 1. Best Cock, any Variety.     | 5. Best Waterfowl.                     |
| 2. Best Hen, any Variety.      | 6. Best Turkey.                        |
| 3. Best Cockerel, any Variety. | 7. Best Utility Bird (Classes 88-102). |
| 4. Best Pullet, any Variety.   |  |

**Aged Birds** must have been hatched previous to, and Cockerels and Pullets in, the year of the Show.

*Entry Fees*—Members, 2s. 6d.; Non-Members, 4s.

LEGHORN—	Class	ORPINGTON—continued.	Class
<i>White</i>	1. Cock	<i>Any other Colour</i>	26. { Hen or Pullet
	2. Hen		
	3. Cockerel		
	4. Pullet	WYANDOTTE—	
<i>Any other Colour</i>	5. Cock	<i>(Gold or Silver)</i>	27. Cock
	6. Hen		28. Hen
	7. Cockerel		29. Cockerel
	8. Pullet		30. Pullet
MINORCA	9. Cock	<i>White</i>	31. Cock
	10. Hen		32. Hen
	11. Cockerel		33. Cockerel
	12. Pullet		34. Pullet
SOOTH GREY	13. Cock	<i>Partridge</i>	35. { Cock or Cockerel
	14. Hen		36. { Hen or Pullet
	15. Cockerel		
	16. Pullet	<i>Columbian</i>	37. { Cock or Cockerel
PLYMOUTH ROCK—			38. { Hen or Pullet
<i>Barred</i>	17. Cock		39. { Cock or Cockerel
	18. Hen	<i>Any other Colour</i>	40. { Hen or Pullet
	19. Cockerel		
	20. Pullet		
<i>Any other Colour</i>	21. { Cock or Cockerel		
	22. { Hen or Pullet	RHODE ISLAND RFD	41. Cock
			42. Hen
ORPINGTON—			43. Cockerel
<i>Black</i>	23. { Cock or Cockerel		44. Pullet
	24. { Hen or Pullet	SUSSEX—	
<i>Any other Colour</i>	25. { Cock or Cockerel	<i>Light</i>	45. Cock
			46. Hen
			47. Cockerel
			48. Pullet

<sup>1</sup> Given by the late Lord Dewar. The Salver will become the property of an exhibitor who shall win it three times, not necessarily in succession.

*Special Entry Forms for Poultry Classes.*

\* See Regulations 66 and 67.

SUSSEX—continued.	Class	UTILITY POULTRY—contd.	Class
<i>Any other Variety</i> . . .	49. Cock 50. Hen 51. Cockerel 52. Pullet	<i>Wyandotte—any Colour</i> . . .	90. {Cock or Cockerel
DORKING— <i>Coloured</i> . . .	53. Cock 54. Hen 55. Cockerel 56. Pullet	<i>Welssummer</i> . . .	91. {Cock or Cockerel
<i>Silver Grey</i> . . .	57. Cock 58. Hen 59. Cockerel 60. Pullet	<i>Any other Variety—heavy breed</i> } . . .	92. {Cock or Cockerel
NOOKS DUMPY . . .	61. Cock 62. Hen 63. {Cockerel or Pullet	<i>Leghorn—White</i> . . .	93. {Hen or Pullet
BARNEVELDER . . .	64. Cock 65. Hen 66. Cockerel 67. Pullet	<i>Leghorn—any other Colour</i> . . .	94. {Hen or Pullet
INDIAN GAME . . .	68. Cock 69. Hen 70. Cockerel 71. Pullet	<i>Wyandotte—any Colour</i> . . .	95. {Hen or Pullet
OLD ENGLISH GAME	72. Cock 73. Hen 74. Cockerel 75. Pullet	<i>Rhode Island Red</i> . . .	96. {Hen or Pullet
BANTAM— <i>Game—Old English</i> . . .	76. Cock 77. Hen	<i>Barnevelder</i> . . .	97. {Hen or Pullet
<i>Game—Modern</i> . . .	78. Cock 79. Hen	<i>Rock—any Colour</i> . . .	98. {Hen or Pullet
<i>Other than Game</i> . . .	80. Cock 81. Hen	<i>Welssummer</i> . . .	99. {Hen or Pullet
<i>Any Variety</i> . . .	82. Cockerel 83. Pullet	<i>Any other Variety</i> . . .	100. {Hen or Pullet
ANY OTHER RECOGNISED BREED OF POULTRY . . .	84. Cock 85. Hen 86. Cockerel 87. Pullet	ANY CROSS FOR LAYING PURPOSES } . . .	101. Hen
UTILITY POULTRY— <i>Leghorn—any Variety</i> . . .	93. {Cock or Cockerel	ANY CROSS FOR LAYING PURPOSES } . . .	102. Pullet
<i>Any other Variety—light breed</i> } . . .	89. {Cock or Cockerel	DUCKS— <i>ylesbury</i> . . .	103. Drake 104. Duck
			105. {Drake (young)
		<i>Orpington</i> . . .	106. {Duck (young)
			107. Drake
			108. Duck
			109. {Drake (young)
			110. {Duck (young)
		<i>Indian Runner</i> . . .	111. Drake
		<i>Any other Variety</i> . . .	112. Duck
			113. Drake
			114. Duck
		GEESE . . .	115. Gander
			116. Goose
		TURKEYS . . .	117. Cock
			118. Hen
		TABLE POULTRY— <i>Any pure Breed</i> . . .	119. Cock
			120. Cockerel
		<i>Any Cross</i> . . .	121. Cock
			122. Cockerel
		<i>Any Pure Breed or Cross</i> . . .	123. {Pair of Pullets

AMOUNT OF POULTRY PREMIUMS, £215, 5s

*Special Entry Forms for Poultry Classes*

## \* DAIRY PRODUCE

Judge : Alexander Garvie

No Exhibitor to show more than one lot in any Class

*Entry Fees*—Members, 5s. ; Non-Members, 7s. 6d.

Class.	Premiums.				
	1st.	2nd.	3rd.	4th.	5th.
	£	£	£	£	£
1. Powdered Butter, not less than 8 lb. . . . .	4	3	2	1	—
2. Fresh Butter, three 1-lb. lots, to be made up in form of bricks . . . . .	4	3	2	1	—
3. Cheddar Cheese, 56 lb. and upwards . . . . .	9	5	3	2	1
4. Cheese, 14 lb. and under . . . . .	5	3	2	1	—
Total . . . . .	£51				

*Special Entry Forms for Dairy Produce.*

\* See Regulations 75 and 76.

**Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 94-96.**

## EGGS

Entries close 13th May

Judge : Miss A. Kinross

Class.	<i>Entry Fee</i> —2s. 6d.	Premiums		
		1st.	2nd.	3rd.
1. One dozen Hen Eggs—white . . . . .		£1	15/-	10/-
2. One dozen Hen Eggs—brown . . . . .		£1	15/-	10/-
3. One dozen Hen Eggs—tinted . . . . .		£1	15/-	10/-
4. One dozen Duck Eggs . . . . .		£1	15/-	10/-
5. One dozen Turkey Eggs . . . . .		£1	15/-	10/-

PRIZE MONEY BY SOCIETY, £11, 5s.

*Special Entry Forms for Eggs.*

### REGULATIONS.

1. All eggs must be fresh, and must be the produce of poultry the property of the exhibitor.
2. Eggs will be received at the Dairy Produce Shed in the Showyard on Monday, the day before the opening of the Show, and till 8 A.M. on Tuesday, the first day of the Show. Judged at 9.30 A.M. on Tuesday.
3. Eggs will be exhibited on suitable plates provided by the Society.
4. Eggs may be removed by exhibitors at the close of the Show ; where this is not done eggs will be returned only if a suitable box is provided for the purpose and the necessary postage or carriage thereon is prepaid.

**HONEY, &c.**

Judge: J. Struthers

*(To be judged at 11 A.M. on Tuesday, 23rd June)***OPEN CLASSES**

Class.	Entry Fees—2s. 6d. each.	Premiums.		
		1st.	2nd.	3rd.
1. Collection of Appliances suitable for a beginner's outfit for Bee-keeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit		20/-	15/-	10/-
2. Best and most complete Frame Hive for general use, with any improvements. Unpainted		20/-	15/-	10/-
3. Best and most complete Hive. Unpainted. Price not to exceed 35/-		20/-	15/-	10/-
4. Six Sections of Comb Honey, excluding Heather Honey		20/-	15/-	10/-
5. Six Sections of Heather Honey		20/-	15/-	10/-
6. Six Jars of Run or Extracted Light-coloured Honey, approximate weight 6 lb.		20/-	15/-	10/-
7. Six Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 6 lb.		20/-	15/-	10/-
8. Six Jars of pressed Heather Honey in liquid form, approximate weight 6 lb.		20/-	15/-	10/-
9. Six Jars of Granulated Honey, approximate weight 6 lb.		20/-	15/-	10/-
10. Two shallow Frames of Comb Honey for extracting purposes		20/-	15/-	10/-
11. Best display of Honey in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 40 lb.		60/-	30/-	20/-
12. Best exhibit of not less than 1 lb. of Wax in any form		20/-	15/-	10/-
13. Best exhibit of not less than 1 lb. of Wax made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration		20/-	15/-	10/-
14. Observatory Hive with Queen and Bees—two or more frames		50/-	30/-	20/-
15. Observatory Hive with Queen and Bees—one frame, no super		40/-	30/-	15/-

**(Confined to Scottish Exhibitors.)**

16. One Standard Frame of Comb Honey for extracting purposes	20/-	15/-	10/-
17. Six Sections of Comb Honey, excluding Heather Honey	20/-	15/-	10/-
18. Six Sections of Heather Honey	30/-	20/-	10/-
19. Six Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 6 lb.	30/-	20/-	10/-
20. Six Jars of pressed Heather Honey in liquid form, approximate weight 6 lb.	20/-	15/-	10/-
21. Six Jars of Run or Extracted Light-coloured Honey, approximate weight 6 lb.	30/-	20/-	10/-

**SILVER CUP OR TAZZA.**

Presented by the late Mr R. Y. HOWIE, Rutherglen.

1. To be competed for annually at the Highland and Agricultural Society's Show, and

The winner, until the trophy is won outright, shall hold the Cup for one year.

2. The Cup to be won outright by the competitor first winning it three times within five years.

3. Any competitor having official connection with an Agricultural College shall not be eligible to compete.



Silver and Bronze Medals will be awarded by the Scottish Bee-Keepers' Association to the First and Second winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point.

PRIZE MONEY BY SOCIETY	£47, 0s. 0d.
CONTRIBUTED BY SCOTTISH BEE-KEEPERS' ASSOCIATION	£10, 10s. 0d.
SILVER CUP OR TAZZA PRESENTED BY THE LATE MR R. Y. HOWIE	£6, 0s. 0d.

*Special Entry Forms for Appliances and Honey.*

## RULES AND REGULATIONS.

1. All exhibits must be despatched in time to be delivered at the Showyard not later than 6 P.M. on Monday, the day before the opening of the Show. Under the railway regulations, exhibitors will require to pay return carriage and cartage when despatching. Return carriage-paid labels will be supplied by the Secretary, and must be addressed for the return journey, and have numbers of Classes on same. Non-compliance with this regulation will mean that the exhibit will be left in the Showyard. **Boxes containing hives, jars, or sections must be screwed and not nailed, and the hives, bottles, and sections so placed that they can be lifted out and replaced without disturbing the packing.**

2. The number of the exhibit will be sent by the Secretary (as entered on the printed slip) and must be placed on every exhibit—viz., **Jars:** on side of jar about half an inch from the foot. **Sections and Frames:** at right top corner of the glass. **Wax:** at right top corner of the glass. Also on 1 lb. **Cakes:** on the underside. No goods will be staged unless this rule is complied with. All competitors must leave the Bee Shed by 9 A.M. on Tuesday morning.

3. No card, trade mark, or name of the exhibitor may be placed upon any part of an exhibit. Every article exhibited must be the property of the exhibitor, and all honey must have been gathered in the natural way within Great Britain, Northern Ireland, and Irish Free State, by bees the property of the exhibitor.

4. Comb Honey Sections,  $4\frac{1}{2}$  inches by  $4\frac{1}{2}$  inches, to be staged in cardboard boxes glazed on both sides, showing not less than  $3\frac{1}{2}$  inches by  $3\frac{1}{2}$  inches of comb surface clear of points of lacing, but allowing easy access to the Judge. Sections with fixed glass will be disqualified.

Shallow Frames,—no paper edging is permissible and each frame must be exhibited in a separate glazed case.

5. All Run, Extracted, and Granulated Honey must be shown in the usual mercantile Glass Jars holding approximately 1 lb., except in Class 11.

6. No exhibitor shall be allowed to take more than one prize in any one class.

7. The Judge shall be empowered to withhold prizes in case of insufficient merit.

8. Should there be in any class three or less than three entries, the value of the first prize may be reduced at the discretion of the Judge to that of the second, the second to that of the third, and no third prize will be awarded.

9. The Judge will commence his inspection at 11 A.M. on Tuesday, and the Bee Shed will be closed to the public during the judging.

10. Exhibits of Honey may be placed in their positions in the shed before the opening and removed at the close of the Show by exhibitors themselves or their representatives. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to place or remove the exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of the exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 P.M. on the closing day of the Show, the Society will hold itself at liberty to hand them over to the railway companies for despatch to the respective exhibitors.

11. No lot can be removed from the yard till 4 P.M. on Friday, the last day of the Show.

12. The Society undertakes no responsibility for the receipt or despatch of exhibits, nor for any injury exhibits may sustain during the Show or otherwise.

13. **Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 94-96.**

## RURAL INDUSTRIES

Judges : Miss Bruce, Classes 1, 2, 3, 4, 5, 6, 7, 8, 9, 18, 19, 20, and 25 ; Miss M. E. Paull, Classes 10, 11, 12, 13, 21, 22, 23, 24, and 26 ; Donald Gair, Classes 14, 15, 16, and 17.

*Entry Fee, 2s. 6d. each article.*

Separate entry for each article.

### OPEN CLASSES.

#### SHETLAND KNITTING.

Classes.	<i>Exhibits to be made from Shetland Wool.</i>	Premiums.		
		1st.	2nd.	3rd.
1.	Fine Lace Shawl or Scarf . . . . .	£3	£2	£1
2.	Fine Lace Goods other than above . . . . .	3	2	1
3.	Jumper or Cardigan—with or without sleeves . . . . .	3	2	1
4.	Exhibits other than above . . . . .	2	1	10/-

#### TWEEDS.

5.	Harris or other Tweed—Hand-woven . . . . .	3	2	1
6.	Tartan—Vegetable-dyed and Hand-woven . . . . .	3	2	1
7.	Carriage Rug or Plaid—Hand-woven . . . . .	3	2	1

#### MISCELLANEOUS.

8.	Hook-Through Floor Rug (new wool) . . . . .	3	2	1
9.	Any other variety Floor Rug (new wool) . . . . .	3	2	1
10.	Specimen of White Embroidery—to be exhibited unwashed . . . . .	3	2	1
11.	Specimen of Coloured Embroidery—silk or cotton (canvas work not eligible) . . . . .	3	2	1
12.	Specimen of Coloured Embroidery—woolwork (canvas work not eligible) . . . . .	3	2	1
13.	Specimen of Old English Quilting . . . . .	3	2	1
14.	Pair of Leather Gloves . . . . .	2	1	10/-
15.	Specimen of Leather Work other than Gloves . . . . .	2	1	10/-
16.	Hand-painted Pottery . . . . .	2	1	10/-
17.	Basket Work (Raffia not eligible) . . . . .	2	1	10/-
18.	Home-spun Yarn—2-3 cuts . . . . .	2	1	10/-
19.	Specimen of Hand-made Lace other than Crochet . . . . .	3	2	1
20.	Men's Golf or Kilt Hose . . . . .	2	1	10/-
				— — — — — £102 10

**RURAL INDUSTRIES—continued.****CONFINED CLASSES.**

Open to Women's Rural Institutes and Members thereof in the whole of Scotland.

	Premiums.		
	1st.	2nd.	3rd.
21. Specimen of Patchwork Quilting . . . . .	£3	£2	£1
22. Article showing Crochet Lace . . . . .	2	1	10/-
23. Article decorated with geometrical design in satin stitch and pulled stitches (to be worked on linen, in linen thread)	3	2	1
24. Specimen of Canvas Work Embroidery (Raffia not eligible) . . . . .	2	1	10/-
25. Pair of Socks, 4 ply, plain knitting . . . . .	2	1	10/-
26. Child's Cotton Dress (age 4-6) with Knickers . . . . .	2	1	10/-
			£26

PRIZE MONEY BY SOCIETY . . . . . £128 10

NOTE.—(a) No exhibit may be entered in more than one Class.

(b) All exhibits must have been completed within the twelve months preceding the Show.

(c) No exhibit mounted under glass will be accepted at the Show.

**REGULATIONS.**

1. The Competition, except where otherwise stated, is open to competitors from all parts of Great Britain, Northern Ireland, and Irish Free State. Societies or Institutes, as well as individuals, shall be allowed to compete.

2. Every exhibit must be the work either of the exhibitor or of a member of the exhibiting Society or Institute, and must have been completed within the twelve months preceding the Show.

3. An entry fee of 2s. 6d. for each exhibit is payable at the time of entry.

4. Exhibits will be received in the Showyard not later than 8 P.M. on Monday, the day before the opening of the Show. Judging will commence at 9 A.M. on Tuesday. The section will be closed to the public during the judging. Exhibits shall not be removed till after the close of the Show.

5. In no case shall a prize be awarded unless the Judge deems the exhibit to have sufficient merit; and where only one or two articles are entered in a class, and the Judge considers them unworthy of the prizes offered, it shall be in his or her power to award a lower prize.

6. Exhibits shall be entirely at the risk of exhibitors, who shall be solely responsible for delivery and removal of their own exhibits. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to remove exhibits, these will be removed by persons hired and paid by the Society. The placing and despatching of exhibits will be done on the understanding that the persons are hired to do the work on behalf of the exhibitors and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. A receipt signed by the exhibitor, on a form to be issued by the Secretary, must be delivered before any exhibit is handed over to the exhibitor or his or her representative.

On the last day of the Show the Shed will be closed to the public at 4.45 P.M., but no exhibit may be removed until 5 P.M.

7. Exhibitors shall be allowed to attach to their exhibits a notice indicating where (in the Showyard or elsewhere) similar articles may be purchased.

8. Exhibits must not be sent to the Society's Office previous to date of Show. Labels, &c., will be posted to Exhibitors about fourteen days prior to the Show.

9. All exhibits to be sent to the Showyard in packing, sufficiently strong, to be used for return.

10. Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 94-96.

*Special Entry Forms for Rural Industries Section.*

## BUTTERMAKING COMPETITIONS

Judges: *Open*—Miss J. Stubbs; *Novice Section*—Miss G. Lewis;  
*Championship*—W. M. Lennox.

*Entry Fee, 2s. 6d. each Competition.*

The Society will hold an open Buttermaking Competition on Wednesday and Thursday, 24th and 25th June, and a Novice Competition on Friday, 26th June.

The Competitors will be balloted into sections containing, as nearly as possible, an equal number of Competitors, and each section will form a separate competition with separate prizes. The Secretary will forward to Competitors, a few days before the Competitions, a note of the days and hours at which they are required to attend.

The sections and prize money will be as follows:—

### WEDNESDAY, 24TH JUNE.

#### *Open Competition.*

Section 1	.	.	.	.	£5, £3, £2, £1.
Section 2	.	.	.	.	£5, £3, £2, £1.

### THURSDAY, 25TH JUNE.

#### *Open Competition (continued).*

Section 3	.	.	.	.	£5, £3, £2, £1.
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Championship	{	<i>First</i> : Gold Medal.
	{	<i>Second</i> : Silver Medal.

Competitors in the Championship Competition will consist of the First, Second, and Third Prize Winners in each of the Sections 1 to 3 inclusive.

### FRIDAY, 26TH JUNE.

Novice Competition (confined to Competitors who have never won a prize of greater value than £2 in Buttermaking Competitions)—

Section 1	.	.	.	.	£3, £2, £1.
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Competitors will be distinguished by Numbers, which, with Competitor's name and address, will be entered in the Catalogue.

The decision of the Directors of the Society in all matters relating to the Competition shall be final.

Entry forms may be obtained from the Secretary, or from Mrs More, Hon. Secretary, British Dairymaids' Association, 16 Rutland Square, Edinburgh, who has kindly agreed to receive entries. These must be lodged *not later than Thursday, 28th May*.

## HORSE-SHOEING AND SHOE-MAKING

Open to Shoeing-Smiths from any part of Great Britain, Northern Ireland, and Irish Free State.

Horses provided for this Competition cannot be entered in any other Class.

*Special Entry Forms for Horse-Shoeing and Shoe-Making Competitions.*

### HORSE-SHOEING COMPETITION

Judges : Robert H. Connachie, M.R.C.V.S. ; Robert Hamilton, jun. ; Ralph A. Stephen

THURSDAY, 25TH JUNE.

#### Class 1.—FARM HORSES (Open Class).

1st Prize, £5, Silver Tea Service,* and Gold Medal.†	5th Prize, £3.
2nd Prize, £5 and Canteen of Outlery.†	6th Prize, £2
3rd Prize, £5 and Gold Medal.‡	7th Prize, £2.
4th Prize, £4 and Gold Medal.§	8th Prize, £1.
	9th Prize, £1.

FRIDAY, 26TH JUNE.

#### Class 2.—FARM HORSES (For Competitors under Twenty-five Years of Age).

1st Prize, £5 and Gold Watch.**	3rd Prize, £2 and Gold Medal.‡
2nd Prize, £3 and Canteen of Outlery.†	4th Prize, £1.

\* Silver Tea Service given by the Scottish Iron & Steel Co., Ltd., Glasgow.

\*\* Gold Watch given by Messrs William Martin, Sons, & Co., Coatbridge.

† Canteens of Outlery given by Messrs Neilson & Cleland, Ltd., Coatbridge.

‡ Gold Medal, given by National Master Farriers' and Blacksmiths' Association, to be awarded to the competitor obtaining the highest number of points in Class 1.

‡ Gold Medals given by the Mustad Horse Nail Company.

§ Gold Medal given by Capewell Horse Nail Company.

PRIZE MONEY BY SOCIETY . . . . .	£29
SILVER TEA SERVICE AND £5 BY THE SCOTTISH IRON & STEEL CO., LTD., GLASGOW . . . . .	£10
GOLD WATCH AND £5 BY MESSRS WILLIAM MARTIN, SONS, & CO., COATBRIDGE . . . . .	£10
OUTLERY BY MESSRS NEILSON & CLELAND, LTD., COATBRIDGE	£8
GOLD MEDAL BY NATIONAL MASTER FARRIERS' AND BLACKSMITHS' ASSOCIATION . . . . .	£4
GOLD MEDALS BY MUSTAD HORSE NAIL CO. . . . .	£4
GOLD MEDAL BY CAPEWELL HORSE NAIL CO. . . . .	£2

#### REGULATIONS.

1. Entries must be made with the Secretary not later than 29th April. Entry Fee, 2s. 6d. for each Class. Entry Forms may be had on application.
2. Competitors eligible to compete in the Junior Class may compete in either Senior or Junior Class, but not in both.

3. The Competition will take place in the Showyard, and will be decided by points, time being taken into consideration. Each Competitor must make and fix one fore and one hind shoe, having previously taken off the old shoes. The shoes must be fullered, with low calkins, and with toe-pieces on hind shoes only. The use of files and wire brushes is not permitted. Each Competitor must bring his own tools, nails, and a striker. The striker will not be allowed to touch the horse's hoof. The local Blacksmiths' and Farriers' Association will provide blowers, forges and anvils. The horses to be shod will also be provided by the Association. Forges and horses will be balloted for.

4. Competitors must attend at the Horse-Shoeing Stance half an hour before they are due to compete.

5. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

*The Waverley horse-shoe iron to be used in the Open Class, and the Dundryvan horse-shoe iron to be used in the Junior Class, will be supplied by Messrs Neilson & Cleland, Ltd., Coatbridge, who will also provide the necessary smithy coal.*

## SHOE-MAKING COMPETITION

Judges: Robert Hamilton, jun.; Ralph Stephen

WEDNESDAY, 24TH JUNE.

1st Prize, £5; 2nd Prize, £4; 3rd Prize, £3; 4th Prize, £2;  
5th Prize, £1.

PRIZE MONEY BY SOCIETY . . . . .	£3
MESSRS WILLIAM MARTIN, SONS, & CO., COATBRIDGE .	£5
THE SCOTTISH IRON & STEEL CO., LTD., GLASGOW .	£5
MESSRS NEILSON & CLELAND, LTD., COATBRIDGE .	£2

### REGULATIONS.

1. Entries must be made with the Secretary not later than 29th April. Entry Fee, 2s. 6d. Entry Forms may be had on application.

2. Each Competitor must make one fore shoe and one hind shoe.

3. Each shoe must be made from  $18\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{9}{16}''$  iron, which will be provided at the Stance.

4. The fore shoe to be fullered and clipped, and the hind shoe fullered, clipped, and toed.

5. The use of files and wire brushes is prohibited.

6. Time allowed will be limited to 40 minutes.

7. Competitors must bring their own tools and a striker, and must attend at Horse-Shoeing Stance 15 minutes before they are due to commence.

8. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

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*Waverley and Dundryvan horse-shoe iron will be supplied by Messrs Neilson & Cleland, Ltd., Coatbridge, who will also supply the necessary smithy coal.*

## LIVE STOCK JUDGING COMPETITION

*Special Entry Forms for Live Stock Judging Competition.*

1. The Society will hold a Live Stock Judging Competition on Thursday, 25th June, commencing at 10 A.M.

2. The Competition shall be open to all persons not exceeding 21 years of age at the date of the Competition.

3. Teams from Agricultural Colleges or from Young Farmers' Clubs in Scotland shall be allowed to compete. The members of these teams shall also enter as individual Competitors. Five members shall form a team.

4. Entries must be lodged with the Secretary of the Highland and Agricultural Society not later than 10 A.M. on Thursday, 14th May. An entry fee of 2s. 6d. shall be paid by each Competitor. Entries of teams must be made in the same way, but no additional fee shall be charged for a team over and above the fee of 2s. 6d. for each individual member.

5. The Stock to be judged shall consist of—

(a) Cattle (three classes)	.	.	{ Shorthorn. Aberdeen-Angus.
(b) Horses (two classes)	.	.	{ Ayrshire or British Friesian. Clydesdales.
(c) Sheep (three classes)	.	.	{ Blackface. Cheviot. Border Leicester.

There will be four animals in each class. The animals to be judged shall be chosen by the Society's Stewards. The Society reserves the right to modify the nature of the classes should difficulty arise in finding suitable material amongst the animals exhibited at the Show.

6. In Judging, breed type shall be taken into account. All stock shall be considered free from acquired blemishes or unsoundness. The Competitors shall judge in groups, and ten minutes shall be allowed for the judging of each class.

7. Competitors are forbidden to discuss the Stock with each other, or with any other person, until the conclusion of the whole Competition.

8. The method of awarding points shall be decided by the Directors of the Society, and their decision in all matters relating to the Competition shall be final.

9. Prizes shall be awarded as follows :—

Individual Competition	.	.	.	£5, £4, £3, £2, £1.
Team Competition—				
1st . . . . .	.	.	.	£10 and 5 Medium Silver Medals.
2nd . . . . .	.	.	.	£5 and 5 Medium Bronze Medals.
Special Prize for College team placed highest in Competition . . . . .	.	.	.	£5.

<sup>1</sup> 'Glasgow Herald' Challenge Cup, value £50, to be awarded each year to the team winning the First Prize in the Team Competition.

<sup>1</sup> Gold Medal to be awarded to the highest individual scorer.

The Society reserves the right to reduce the number of prizes in the event of there being less than twenty Competitors in the Individual Competition and less than three teams in the Team Competition.

TOTAL PRIZE MONEY BY SOCIETY, £35.

<sup>1</sup> Given by Messrs George Outram & Co., Ltd., Glasgow.

**ABSTRACT OF PREMIUMS.**

## GIVEN BY THE SOCIETY.

Cattle . . . . .	£1309	0	0
Horses . . . . .	940	0	0
Jumping Competitions . . . . .	207	0	0
Sheep . . . . .	643	0	0
Goats . . . . .	42	0	0
Pigs . . . . .	152	0	0
Scottish Bacon Pig Competition . . . . .	36	0	0
Poultry . . . . .	215	5	0
Dairy Produce . . . . .	51	0	0
Eggs . . . . .	11	5	0
Honey, &c. . . . .	47	0	0
Rural Industries . . . . .	128	10	0
Buttermaking Competitions . . . . .	89	0	0
Horse-Shoeing and Shoe-Making Competitions . . . . .	32	0	0
Live-Stock Judging Competition . . . . .	35	0	0
Medals to Breeders, &c. . . . .	50	0	0
Flower Show—Gold Medals . . . . .	37	10	0
Forestry <sup>1</sup> . . . . .	40	0	0
	<u>£4015</u>	<u>10</u>	<u>0</u>

## CONTRIBUTED PRIZES, CUPS, &amp;c.

President's Champion Medals . . . . .	25	0	0
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**CATTLE.**

* Paisley Perpetual Gold Challenge Cup . . . . .	£300	0	0
* The late Mr William Duthie—Silver Cup . . . . .	150	0	0
* Mr W. M'Nair Snadden—Silver Cup . . . . .	50	0	0
* J. Baird & Co. (Falkirk) Ltd.—Emilio R. Casares, jun.— Memorial Cup . . . . .	52	10	0
The Shorthorn Society (and 2 Medals) . . . . .	40	0	0
The Shorthorn Society (for Dairy Shorthorns) . . . . .	45	0	0
* Mr J. E. Kerr—Silver Cup . . . . .	50	0	0
* The late Sir George Macpherson Grant, Bart.—Silver Cup . . . . .	50	0	0
* Mr Eduardo Estanguet, Argentina—Silver Cup . . . . .	52	10	0
* The late Sir John Macpherson Grant, Bart.—Silver Cup . . . . .	50	0	0
* Mr Falconer L. Wallace—Silver Cup . . . . .	50	0	0
Aberdeen-Angus Cattle Society—Gold Medal . . . . .	10	0	0
* Galloway Cattle Society—Dr Gillespie Memorial Trophy . . . . .	50	0	0
* Galloway Cattle Society—Silver Cup . . . . .	50	0	0
* Mrs Brown, Kirkbrec, Glasgow—Knockbrec Challenge Cup . . . . .	50	0	0
* General Sir Ian Hamilton, G.C.B.—Silver Cup . . . . .	50	0	0
* Highland Cattle Society of Scotland—Silver Cups . . . . .	89	5	0
* Cowhill Champion Cup . . . . .	30	0	0
Ayrshire Cattle Herd-Book Society . . . . .	20	0	0
* Corporation of Edinburgh Perpetual Gold Challenge Cup . . . . .	100	0	0
* Lady Rachel Workman MacRobert—Champion Silver Bell . . . . .	52	10	0
* British Friesian Cattle Society—Silver Cup . . . . .	52	10	0
British Friesian Cattle Society . . . . .	50	0	0
Messrs Brown & Polson, Ltd. . . . .	10	0	0
	<u>1504</u>	<u>5</u>	<u>0</u>
Carry forward . . . . .	<u>£5544</u>	<u>15</u>	<u>0</u>

<sup>1</sup> Grant to Royal Scottish Forestry Society for Forestry Section.

\* Challenge Prizes.



ABSTRACT OF PREMIUMS—*continued*

Brought forward	.	.	.	£5544 15 0
<b>HORSES.</b>				
*Clydesdale Horse Society—Cawdor Challenge Cups	.	.	.	£105 0 0
*Mr William Meiklem, Kirkcaldy—Gold Challenge Cup	.	.	.	115 10 0
*Angus Agricultural Society—Silver Cup	.	.	.	52 10 0
"William Taylor" Memorial Committee	.	.	.	10 0 0
*Fife and Kinross Perpetual Gold Challenge Cup	.	.	.	200 0 0
*Dumfriesshire Hunt—Dumfries Centenary Silver Challenge Cup	.	.	.	100 0 0
Hunters' Improvement and National Light Horse Breeding Society—Gold Medal	.	.	.	5 0 0
Buccleuch Hunter Breeding Society	.	.	.	50 0 0
*Buccleuch Hunter Breeding Society—Cowdenknowes Perpetual Challenge Cup	.	.	.	20 0 0
*Mrs Moncrieff Wright—Kinmonth Perpetual Gold Challenge Quaich	.	.	.	100 0 0
Department of Agriculture for Scotland	.	.	.	40 0 0
Highland Pony Society	.	.	.	16 0 0
National Pony Society	.	.	.	10 0 0
A few Members of the Shetland Pony Stud-Book Society—Perpetual Silver Challenge Cnp	.	.	.	50 0 0
Shetland Pony Stud-Book Society (Medal)	.	.	.	...
				<hr/> 874 0 0
<b>SHEEP.</b>				
*Mr and Mrs Francis A. Rottenburg—"Lochlane" Silver Challenge Cup	.	.	.	£50 0 0
"James Archibald" Prize	.	.	.	20 0 0
*Renfrewshire Perpetual Gold Challenge Cup	.	.	.	250 0 0
*Cheviot Sheep Society—Borthwick Perpetual Challenge Cup	.	.	.	25 0 0
Tweeddale Gold Medal	.	.	.	25 0 0
Society of Border Leicester Sheep Breeders—Gold Medals	.	.	.	20 0 0
*Dundee Citizens' Perpetual Silver Challenge Cup	.	.	.	50 0 0
Oxford Down Sheep-Breeders' Association	.	.	.	11 0 0
Suffolk Sheep Society	.	.	.	28 0 0
*Suffolk Sheep Society—Silver Cup	.	.	.	15 0 0
Wensleydale Longwool Sheep-Breeders' Association	.	.	.	10 0 0
				<hr/> 499 0 0
<b>GOATS.</b>				
Department of Agriculture for Scotland	.	.	.	£12 0 0
*The late Lord Dewar—Silver Cup	.	.	.	21 0 0
				<hr/> 33 0 0
<b>PIGS.</b>				
*Dundee Citizens' Perpetual Silver Challenge Cup	.	.	.	£50 0 0
National Pig-Breeders' Association—Gold Medals and Prize Money	.	.	.	25 0 0
Large Black Pig Society (and 2 Medals)	.	.	.	5 0 0
				<hr/> 80 0 0
<b>SCOTTISH BACON PIG COMPETITION.</b>				
*Silver Cup	.	.	.	10 10 0
<b>POULTRY.</b>				
*The late Lord Dewar—Champion Challenge Silver Salver	.	.	.	30 0 0
<b>HONEY.</b>				
The Scottish Bee-Keepers' Association (and 2 Medals)	.	.	.	£10 10 0
The late Mr R. Y. Howie—Silver Cup or Tazza	.	.	.	6 0 0
				<hr/> 16 10 0
Carry forward	.	.	.	£7087 15 0
* Challenge Prizes.				

ABSTRACT OF PREMIUMS—*continued*

Brought forward . . . £7087 15 0

## HORSE-SHOEING AND SHOE-MAKING.

The Scottish Iron & Steel Co., Ltd., Glasgow (Silver Tea Service and £10)	£15 0 0	
Messrs W. Martin, Sons, & Co., Coatbridge (Gold Watch and £10)	15 0 0	
Messrs Neilson & Cleland, Ltd., Coatbridge (Cutlery, &c.)	10 0 0	
National Master Farriers' and Blacksmiths' Association (Gold Medal)	4 0 0	
Mustad Horse Nail Co. (2 Gold Medals)	4 0 0	
Capewell Horse Nail Co. (Gold Medal)	2 0 0	
		50 0 0

## STOCK JUDGING COMPETITION.

*Messrs George Outram & Co., Ltd., Glasgow—'Glasgow Herald' Challenge Cup (and Gold Medal)	50 0 0
	<u>£7187 15 0</u>

\* Challenge Prizes.

JOHN STIRTON, *Secretary*.

8 EGLINTON CRESCENT,  
EDINBURGH 12. *February* 1936.

## **SILVER MEDALS FOR NEW OR IMPROVED IMPLEMENTS.**

See Regulations on page 92.

## **FORESTRY EXHIBITION.**

For information as to above, apply to the Joint-Secretaries, Royal  
Scottish Forestry Society, 8 Rutland Square, Edinburgh 1.

**The Society's Show for 1937 will be held  
at Alloa.**

# MEMBERS ADMITTED SINCE THE LIST WAS PUBLISHED IN APRIL 1935.

ARRANGED ACCORDING TO SHOW DISTRICTS.

(ELECTED 5TH JUNE 1935 AND 8TH JANUARY 1936.)

## 1.—GLASGOW DIVISION

### ARGYLL

Admitted

- 1935 Keith, Robert A., Tibertich, Kilmartin  
1936 Ross, Donald, North Shian, Appin  
1936 Stewart, Major Ian M., yr. of Achnacone, Appin  
1935 Yellowless, R., Strachurmore Farm, Strachur

### AYR

- 1935 Anderson, James, Witslaw, Sorn  
1936 Auld, Matthew S., West Plann, Cross-house  
1936 Black, John S. T., Fisherton, Dunure  
1935 Dunlop, Quintin, jun., Greenan, Ayr  
1935 Gilliland, Thomas, Manager, The Scottish Co-operative Wholesale Society, Ltd., 19 Irvine Road, Kilmarnock  
1935 Longmuir, R. G., Bank Street, Irvine  
1936 McMillan, Archibald, Thirdpart, Beith  
1935 Mathie, William, Myre mill, Maybole  
1935 Reid, John, Burrowland, Kilwinning  
1935 Sim, William, Contractor, Stewarton, Ayr  
1935 Smith, Carl, c/o Messrs M'Gill & Smith, Ltd., Ayr  
1935 Watson, John, c/o Messrs M'Gill & Smith, Ltd., Ayr

### BUTE

- 1935 Stewart, David L., Selma House, Millport

### LANARK

- 1935 Baxter, Alexander C., Stonehill, Carmichael, Thankerton  
1936 Blair, A. G., The National Farmers' Union Mutual Insurance Society, Ltd., 176 West Regent Street, Glasgow, C.2  
1935 Brown, James, Westraw, Pettinain, Thankerton  
1935 Carnie, Thomas Young, Wardie, Mansewood Road, Newlands, Glasgow  
1936 Fleming, William, Wellburn, Lesmahagow  
1935 Freeland, James Alex., 50 Marywood Square, Strathbungo, Glasgow, S.1.  
1935 Hamilton, Thomas, Springhill Farm, Shotts  
1935 Harvey, Mrs Margaret, Commercial Hotel, Anderson Street, Airdrie  
1935 Harvey, Thomas C., Commercial Hotel, Anderson Street, Airdrie

- 1935 Hayburn, John, Henshilwood, Braehead, Carnwath  
1935 Imrie, George, 'The People,' Robertson Street, Glasgow  
1935 Lyons, Walter T., 'Daily Mail,' 19 Hope Street, Glasgow, C.2  
1936 MacArthur, Duncan Alastair, Nunnerie, Elvanfoot  
1935 MacLeod, James Haldane Calder, 694 Duke Street, Glasgow, E.1  
1935 Macrae, Hugh R., 124 St Vincent Street, Glasgow  
1936 Milligan, Robert, 'Summerhill Avenue, Larkhall  
1935 Murie, James, Greenbank, Bothwell  
1935 Nelson, James, 21 Jura Street, Glasgow, S.W.2  
1935 Ogilvie, R., 'Daily Mail,' 19 Hope Street, Glasgow, C.2  
1936 Sands, Peter J., 25 Highburgh, Dowanhill, Glasgow, W.2  
1935 Sinclair, William, c/o Messrs Dunlop Rubber Co., Ltd., 70 North Wallace Street, Glasgow  
1935 Spencer, Walter, 'The People,' Robertson Street, Glasgow  
1935 Stirling, W., Anglo-American Oil Co., Ltd., 118 Queen Street, Glasgow  
1936 Stodart, Thomas, Garrauld, Lesmahagow  
1935 Todd, Robert W., 2 Hamilton Park Avenue, Glasgow, W.2  
1935 Trainer, John C., Byretown, Lanark  
1935 Young, Alfred Caldwell, 200 St Vincent Street, Glasgow, C.2

### RENFREW

- 1935 Alexander, James, "Grangepeel," East Kilbride Road, Busby  
1935 Collins, Mrs Katharine W., Barochan, Houston  
1935 Gilchrist, John, Yonderton, Renfrew  
1935 Heys, James, Pacamuir Farm, Kilmacolm  
1935 Houston, Gavin, Greenhill Farm, Elderslie  
1935 Malcolm, William, Netherfield, Johnstone  
1936 Millar, John, 4 Kingston Road, Bishopston  
1935 Park, R., Hatton Farm, Bishopston  
1935 Porter, William, 21 Buchlyvie Road, Ralston, Paisley  
1935 Watson, Mrs Robert, Johnstone Castle, Johnstone, by Renfrew

## 2.—PERTH DIVISION

## ANGUS

(WESTERN DISTRICT)

- 1935 Grubb, Norman, The Northern Agricultural Co., Ltd., Tay Oilcake Works, Stannergate, Dundee  
 1935 Maitland, Colonel G. R., "Burnside," by Forfar  
 1935 Muir, Miss Frances J., Holmstead, Craigie, Broughty Ferry  
 1935 Rennie, R., Nether Middleton, Glen Ogilvy, Angus  
 1935 Robertson, J., "Daily Mail, 6 Byron Street, Dundee  
 1935 Storie, Mrs Violet, Downfield Nurseries, Dundee

## FIFE

- 1935 Berwick, D. F. G., Ardross, Elie  
 1936 Clark, Allan William, Woodbank, Windygates  
 1935 Glen, James K. F., Lothian Street, Burntisland  
 1936 Grant, A. G., Leven Oil Mills, Leven  
 1936 Kellock, Allan, Pathhead Muir, Kirkcaldy  
 1936 Laing, Athole M., Woodburne, Ceres  
 1935 Lilburn, James, Craigforth, Earlsferry, Elie  
 1935 Lohoe, William, Wester Balrymonth, St Andrews  
 1936 Mackintosh, Hugh, National Bank Buildings, Anstruther  
 1936 Millar, Mrs Euphemia Inglis, Inveriel, Kirkcaldy  
 1935 Pollock, James, 17 Charles Street, Dunfermline  
 1936 Wilson, Thomas, Carslogie, Cupar, Fife

## KINROSS

- 1935 Hogg, John B., Annacroich, Kinross

## PERTH

(PERTH SHOW DISTRICT)

- 1935 Brough, Miss Frances, Brunty House, Burrelton  
 1935 Brough, James, Brunty House, Burrelton  
 1935 Dalghish, William, West Mains, Tullibardina, Auchterarder  
 1935 Gilmour, Allan, Grandtully Poultry Farm, Strathay  
 1935 Gilmour, Mrs Antoinette, Grandtully Poultry Farm, Strathay  
 1935 Gray, William, Tullymet, Ballinluig  
 1935 Hain, John James Galletly, 1 Farm Road, Gannochy, Perth—*Free Life Member*  
 1935 Hope, Thomas, Clashbenny, Glen-carse  
 1935 Nicoll, John O., 24 Caledonian Road, Perth  
 1936 Proctor, Alexander, The Haugh, Blairgowrie  
 1936 Roberts, Sir J. D., Strathallan Castle, Auchterarder  
 1935 Simpson, Captain James P. P., North Inchmichael, Errol  
 1935 Strang, Gavin, Ardargie Mains, For-gandenny  
 1935 Wyllie, Mitchell, Milton Farm, Lun-carty, Perth  
 1935 Wyllie, Scott, jun., Milton Farm, Lun-carty, Perth

## 3.—STIRLING DIVISION

## CLACKMANNAN

- 1935 Robertson, David, Chief Constable, County Buildings, Alloa

## DUMBARTON

- 1935 Howe, William, Auchencroch House, Gartocharn, by Alexandria  
 1935 Ker, Major R. M., Eastertoun, Milngavie  
 1935 Lumsden, Mrs. Arden, Dumbartonshire  
 1936 Macfarlan, Farlan James, Faslane, Shandon, Helensburgh  
 1935 Watson, George, Wester Auchencarroch, Alexandria

## PERTH

(STIRLING SHOW DISTRICT)

- 1936 M'Ara, James T. B. H., Mains of Callander, Crieff  
 1936 M'Ara, Miss Mitchell, Mains of Callander, Crieff

- 1935 M'Morran, John, Greenyards Farm, Dunblane  
 1935 MacNee, William, Butcher, Loch Leven, Killin  
 1935 Scott, Miss Mary A., Pine Lea, Dunblane  
 1936 Sharp, Peter Mercer, Bardrill, Blackford  
 1935 Steven, Robert, Cambusbeg Farm, Callander

## STIRLING

- 1936 Brown, Mrs John, Westerton, Killearn  
 1935 Dewar, Peter Andrew, "Craigdlu," Stirling  
 1935 Goodwin, M., Peathill Farm, Bonny-bridge  
 1936 Jarvie, Walter, Redbrae Farm, Falkirk  
 1935 MacMillan, D. MacL., Stuckentaggart Poultry Farm, Drynen  
 1936 Mitchell, Alexander, Waterslap, Airth

## 4.—EDINBURGH DIVISION

## MID-LOTHIAN

- 1936 Bosomworth, Clifton R., 24 Dalhousie Terrace, Edinburgh  
 1935 Brechin, Mrs Madge B., 39 Buckingham Terrace, Edinburgh  
 1936 Connell, Charles Gibson, W.S., 10 Duke Street, Edinburgh  
 1936 Crichton, James Alexander, 26 Lygon Road, Edinburgh  
 1936 Dick, Maxwell C., 125 Constitution Street, Leith  
 1936 Dickson, John (Scottish Agricultural Industries, Ltd.), 35 Charlotte Street, Leith  
 1936 Fairbairn, James, 14 Succoth Avenue, Edinburgh  
 1935 Freer, Robert Geddes, 29 and 31 Bath Street, Leith  
 1936 Gordon, W. D., B.Sc. (Agric.), The British Oil and Cake Mills, Ltd., Seafield Place, Leith  
 1935 Henderson, William Lewis, University Experimental Farm, Cockburn, Balerno  
 1936 Henton, J. L., 10 Elder Street, Edinburgh  
 1936 M'Gregor, Cecil George, B.Sc., Quay-side Mills, Leith  
 1936 M'Killop, James, jun., Canaan Lodge, 48 Canaan Lane, Edinburgh  
 1935 M'Nair, George, 11 Linkfield Road, Musselburgh  
 1935 M'Nair, Harry, 76 Willowbrae Avenue, Edinburgh  
 1935 Mathieson, Donald J. M., Farm Manager, Shothed, Balerno  
 1935 Newbigging, William H., Broomvale, South Gyle Road, Corstorphine  
 1935 Paterson, Douglas J., c/o Messrs Dunlop Rubber Co., Ltd., 4-8 Canning Street, Edinburgh  
 1935 Robertson, A. J., 80 George Street, Edinburgh  
 1936 Sharp, William, Heriot Mill, Heriot  
 1936 Somerville, J. A., Smeaton, Dalkeith  
 1935 Taylor, A. W., M.R.C.V.S., Moredun Institute, Gilmerton  
 1936 Taylor, Gordon P. (The British Oil and Cake Mills, Ltd.), Seafield Place, Leith  
 1935 Thomson, Miss Barbara Louise, of Glenpark, Glenpark, Balerno  
 1935 Thomson, Miss Sarah Wishart, of Glenpark, Glenpark, Balerno  
 1936 Tod, Archibald Alexander Laing, Nether Brotherstone, Heriot  
 1936 Tod, John Dun, Nether Brotherstone, Heriot (St Leonards, Leaswade)  
 1935 Todd, Mrs I. L., 4 Bright's Crescent, Edinburgh 9  
 1935 Todd, Dr John B., 4 Bright's Crescent, Edinburgh 9  
 1936 Wilson, Muir Anderson, 260 Dairy Road, Edinburgh  
 1936 Wilson, William Angus, 32 Charlotte Square, Edinburgh

## EAST LOTHIAN

- 1936 Fullarton, John, c/o James S. Fullarton, Tranent Mains, Tranent  
 1936 Lawrie, James D., Bayview, Gullane  
 1935 Maibland, W. F., Dunloe, Tranent  
 1935 Stodart, James Anthony, Kingstoun, North Berwick

## WEST LOTHIAN

- 1936 Arkley, James, Kingsfield, Linlithgow  
 1936 Crawford, James, Cousland, Bathgate  
 1935 Ivory, Basil G., C.A., of Binny, Uphall  
 1936 Nimmo, Thomas, Brashead, Fauldhouse  
 1935 Tudsbury, Francis, C.B.E., of Champfleurie, Linlithgow

## 5.—ABERDEEN DIVISION

## ABERDEEN

- 1935 Barclay, John, Mains of White Cairns, Belhelvie  
 1935 Brown, Alexander, Aberdeen Commercial Company, Huntly  
 1935 Cameron, Peter, Glenmillan, Lumphannan  
 1936 Clark, Mrs Ian, Auchentoul, Alford  
 1935 Connon, John, Bogs of Coullie, Kemnay  
 1935 Cowie, Peter, Brankanentum, Insh  
 1935 Cran, James Bruce, Morlich, Glenkindie  
 1935 Cranna, Miss J., 34 Belvidere Crescent, Aberdeen  
 1935 Douglas, John W. E. J., Ladyhill, Bieldside, Aberdeen  
 1935 Douglas, Mrs Olga E., Ladyhill, Bieldside, Aberdeen  
 1935 Duncan, Robert L. F., City Auction Mart, Aberdeen  
 1936 Elder, John, 57 Gray Street, Aberdeen  
 1935 Elphinstone, John, Melkie Rathen, Lomay  
 1935 Forbes, Forbes S., City Auction Mart, Aberdeen  
 1935 Fuller-Maitland, Mrs, Fendraught, Huntly  
 1935 Gibson, Alexander Rough, Newpark, Countesswells, Aberdeen  
 1935 Hendry, Alexander Keith, Spreaderhill, Lomay  
 1935 Hutcheson, Mrs William, Ordley, Auchterless  
 1935 Hutcheson, James William (George Hutcheson & Co., Ltd.), 47 Marischal Street, Aberdeen  
 1935 Ironside, William, Mains of Forest, Fraserburgh  
 1935 Johnston, R. W., F.S.I., F.A.I., 217 Union Street, Aberdeen

- 1935 Lees, Alexander, 80 Anderson Avenue, Woodside, Aberdeen  
 1935 Lydall, Miss Margaret H., Williamston Home Farm, Inverch  
 1935 Macintosh, A. Fraser, Chairman, Northern Co-operative Society, Ltd., 54 Loch Street, Aberdeen  
 1935 M'Laren, George R., The Aberdeen Grain Warehousing Co., Ltd., 24-30 Commerce Street, Aberdeen  
 1935 Massie, Robert P., Lochgreens, Dyce  
 1935 Milne, Adam, Muirstone, Tyrie, Fraserburgh  
 1935 Montgomery, A. D., Slopefield, Manno-field, Aberdeen  
 1935 Norrie, Herbert James, Engineer, New Deer  
 1935 Partridge, Stanley, Mid Ardlaw, Fraserburgh  
 1935 Pollard-Urquhart, M. B., Craigstone Castle, Turiff  
 1935 Roger, George Bennett, c/o Messrs Dunlop Rubber Co., Ltd., 52-60 Lead-side Road, Aberdeen  
 1935 Rose, Lieut. - Colonel Alexander M'Gregor, D.S.O., Birchwood, Cults, Aberdeen  
 1935 Rose, George Falconer, of Auchernach and Rhinstock, Strathdon  
 1935 Russell, S. C., Aden, Mintlaw  
 1935 Sang, Alexander C., Managing Secretary, Northern Co-operative Society, Ltd., 54 Loch Street, Aberdeen  
 1935 Smith, Fred. Manager, Messrs Claud Hamilton, Ltd., 254 Union Street, Aberdeen  
 1935 Smith, Mrs Laidlaw, The Power House, Pittodrie, Pitcairnie  
 1936 Smith, Robert (Warden Insurance Co., Ltd.), 218 Union Street, Aberdeen  
 1935 Stevenson, Alexander, 46 Schoolhill, Aberdeen  
 1936 Stuart, James, Craigsches, Aberdeen  
 1935 Taggart, Charles, 12 St Clair Street, Aberdeen  
 1935 Watt, Mrs G., Byth House, New Byth  
 1935 Wyllie, Mrs George, Moresby, Cults, Aberdeen

**ANGUS****(EASTERN DISTRICT)**

- 1935 Balfour, George R., Balbirnie Mills, Brechin  
 1936 Booth, John, West Mains of Rossie, Montrose  
 1935 Stephen, Alexander, Curriend, Carmyllie, Arbroath

**BANFF**

- 1935 Chalmers, Andrew, Gowanhill, Banff  
 1935 Gill, Alexander, Bloodymires, Macduff  
 1935 Grant, Charles S., Backhill, Banff  
 1935 Hendry, Robert, Ruthrie, Aberlour  
 1935 M'Robert, Alexander, Greenlaw, Alval, Banff  
 1935 M'Robert, Alexander, jun., Greenlaw, Alval, Banff  
 1935 M'Robert, John, Greenlaw, Alval, Banff  
 1935 M'Vean, Hugh, M.R.C.V.S., Craigel-lachie  
 1935 Rough, George John, Gordon-Richmond Estates Office, The Falls, Glenlivet  
 1935 Smith, John, Home Farm, Wester Elchies, Aberlour  
 1935 Wishart, Henry Ferguson, Drummuir Lime Works, Keith  
 1935 Young, Gordon, Arradoul Mains, Buckie

**KINCARDINE**

- 1935 Doig, J. A., Marine Hotel, Muchalls  
 1935 Falconer, Miss Mary E., Roscobie, Banchory  
 1935 Ferner, Joseph, Drumforber, Laurence-kirk  
 1935 Findlay, George, Waulkmill, Laurence-kirk  
 1935 Reid, Alexander, Mill of Haulkerton, Laurencekirk  
 1935 Smith, Leslie, Easthill, Laurencekirk  
 1935 Wilson, Mrs Margaret, Dunvegan, Newtonhill

**6.—DUMFRIES DIVISION****DUMFRIES**

- 1936 Calwell, Dr Andrew Fisher, Langholm  
 1936 Calwell, William Noel, Langholm  
 1936 Connel, David Eskdale, Newton, Kirkpatrick-Fleming, Lockerbie  
 1936 Connel, James Black, Newton, Kirkpatrick-Fleming, Lockerbie  
 1936 Greig, William M., Drummuir, Collin, Dumfries  
 1935 Hawley, M'Kill Maxwell, Porterstown, Keir, Thornhill  
 1935 Jenkins, George John, O.B.E., Templand Farm, Templand, Lockerbie  
 1936 Johnson-Ferguson, Brian, Springkell, Eaglesfield  
 1936 Kingan, James, jun., Lochhill, New Abbey Road, Dumfries  
 1935 Marshall, Mrs Margaret J. D., Broom-bush, Lockerbie

- 1936 Moffat, Alexander Gray, Garwald, Langholm  
 1936 Moffat, John, Georgesfield, Langholm  
 1936 Prevost, W. A. J., Craigieburn, Moffat

**KIRKCUDBRIGHT**

- 1936 Peacock, John Alexander, Kirkpatrick-Durham, by Dalbeattie

**WIGTOWN**

- 1935 Murray, Alexander, Solicitor, Union Bank Buildings, Stranraer

## 7.—INVERNESS DIVISION

## CAITHNESS

- 1935 Bruce, James S., 41 High Street, Wick  
 1935 Coghill, Alexander, West Kirk, Wick  
 1935 Custer, David, Durran, Olrig, Caithness  
 1935 Harrold, Donald, Lower Reiss, Wick

## INVERNESS

- 1935 Calder, Miss I., "Dunedin," Ballifeary Lane, Inverness  
 1935 Leith, Mrs R. L., Breakachy, Laggan, Kingussie  
 1935 Manson, Anderson, B.Sc. (Agric.), Balclone, Lochmaddy, North Uist  
 1936 Walker, Mrs F. W., Leys Castle, Inverness  
 1935 Williamson, Donald, Craigalastair, Fort Augustus

## MORAY

- 1935 Anderson, James, Miltonhill, Alves, Forres  
 1936 Cattanaach, Donald, Blacksmith, Crook of Alves, Forres  
 1935 Christie, Ronald D., Braes of Enzie, Clochan, Banffshire (Morayshire)  
 1936 Douglas, George, Easter Calcots, Elgin  
 1935 Fettes, John, Westerton, Pochabers  
 1936 Mackay, John Hutcheon, Auchenhallrig, Spey Bay  
 1936 Peterkin, Mrs Grant, Grange Hall, Forres  
 1936 Petrie, John Nicol, Newton, Elgin  
 1935 Sellar, David G., Bruceland Farm, Elgin

## NAIRN

- 1935 Gordon, John, Chappanhal, Nairn  
 1935 Lang, J. H. G., Holme Rose, Gollausfield, Inverness-shire (Nairnshire)

## ORKNEY AND SHETLAND

## ORKNEY

- 1936 Flott, Thomas S., Kingshouse, Harray, Orkney  
 1936 Hourston, Charles, Beaquoy Farm, Dounby, Orkney  
 1936 Kirkpatrick, William Garson, Newhall, Stromness

## ROSS AND CROMARTY

- 1936 M'Donald, James, Brae Park, Duncans-ton, Conon Bridge  
 1936 MacKenzie, Donald U., Drumdyre, Oullicudden, Conon Bridge  
 1935 M'William, Mrs R. S., Gaiguston, Muir of Ord  
 1936 Sawyer, R. E., Inverewe, Poolewe

## SUTHERLAND

- 1935 Sutherland, James Alastair Munro, Drumrunie Estate Office, Lochinver, Sutherland

## 8.—BORDER DIVISION

## BERWICK

- 1936 Elliot, Mrs Elizabeth L. S., Thirlestane, Lauder  
 1936 Elliot, Miss Janet Roberts Lindsay, Thirlestane, Lauder  
 1936 Ferguson, Mrs, of Carolside, Earliston  
 1936 Fyfe, William, Garden House, Ayton Castle, Ayton  
 1936 Jackson, Robert, Reedyloch, Edrom  
 1935 Leachallas, H. F., Clackmae, Earliston  
 1936 Philip, Robert Wilson, Beach Villa, Eyemouth  
 1936 Ross-Taylor, Walter, Mungoswalls, Duns  
 1936 Runciman, James, of West Mains, Lauder  
 1936 Sharp, Andrew, Longcroft, Lauder  
 1936 Thomson, Mrs Catherine T., Lambden, Greenlaw

## PEEBLES

- 1936 M'Dougall, John L., Skirling Mill, Peebles  
 1936 Robertson, D. Mackenzie, 68 Rosetta Road, Peebles  
 1936 Thomson, William T., Polmood, Tweedsmuir, Biggar

## ROXBURGH

- 1936 Aikman, Mrs N. G., Jedneuk, Jedburgh  
 1936 Anderson, John James, East Boonraw, Hawick

- 1936 Bell, William A., Branxholme Park, Hawick  
 1936 Bracken, Viscount, Mertoun House, St Boswells  
 1936 Chalmers, John Rutherford, Rutherford Lodge, Roxburgh  
 1936 Chisholm, John, Briarbank, Melrose  
 1936 Elliot, John S., Browndeanlaws, Jedburgh  
 1936 Fisher, Alan Forester, St Boswells Bank, St Boswells  
 1936 Hamilton, Ian Knox, George and Abbotsford Hotel, Melrose  
 1936 Hamilton, Mrs M. E., George and Abbotsford Hotel, Melrose  
 1936 Laurie, Thomas S., Ormiston Terrace, Melrose  
 1936 Montagu-Douglas-Scott, Lieut. John H., of Kirklands, Ancrum  
 1936 Scott, Charles Douglas, Mossburnford, Jedburgh  
 1936 Smith, Mrs E. M. H., Clifton Cote, Kelso  
 1936 Stoddart, Miss Agnes Y., of Kirklands, Melrose

## SELKIRK

- 1936 Connor, Edwin Charles, c/o County Stables, Selkirk  
 1936 Rodgeron, John, County Stables, Selkirk



## ENGLAND AND WALES

- |   |   |
|---|---|
| 1935 Airey, Alfred James (Messrs Dunlop Rubber Co., Ltd.), 87 Wheelwright Road, Erdington, Warwickshire<br>1936 Barber, Mrs D. A., 9 King's Avenue, Meols, Wirral, Cheshire<br>1935 Barber, David Alan, c/o Messrs Barber & Garratt, G. 18 Exchange Buildings, Liverpool<br>1935 Boadle, Archie, West End Farm, Flimby, Maryport, Cumberland<br>1935 Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed<br>1936 Harrison, S. O. (John Fowler & Co. (Leeds), Ltd.), 26 Westley Road, Bury St Edmunds, Suffolk | 1936 Nickson, Hugh, 12 Aubrey Walk, London, W.8<br>1936 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate<br>1936 Pattullo, David L., Norsted Manor, Farnborough, Kent<br>1936 Purchasehouse, Harold, "Farmside," 30 Falkland Road, Ecclesall, Sheffield 11<br>1935 Rank, J. V., Ouborough, Godstone, Surrey<br>1935 Smith, James, Southburn Estate Office, Driffield, E. Yorks.<br>1936 Watt, Miss Hilda, Knowesfield, Carlisle |
|---|---|

## IRELAND

- 1936 Campbell, K. M., B.Sc., Greenmount Agricultural College, Muckamore, Co. Antrim

## THE DOMINIONS AND COLONIES

- 1936 Verma, H. C., Supervisor, Imperial Institute of Animal Husbandry and Dairying, Imperial Agricultural Department, Government of India, Bangalore, South India

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\* Firms are not admitted as Members; but if one partner of a firm becomes a Member the firm is allowed to exhibit at Members' rates.

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